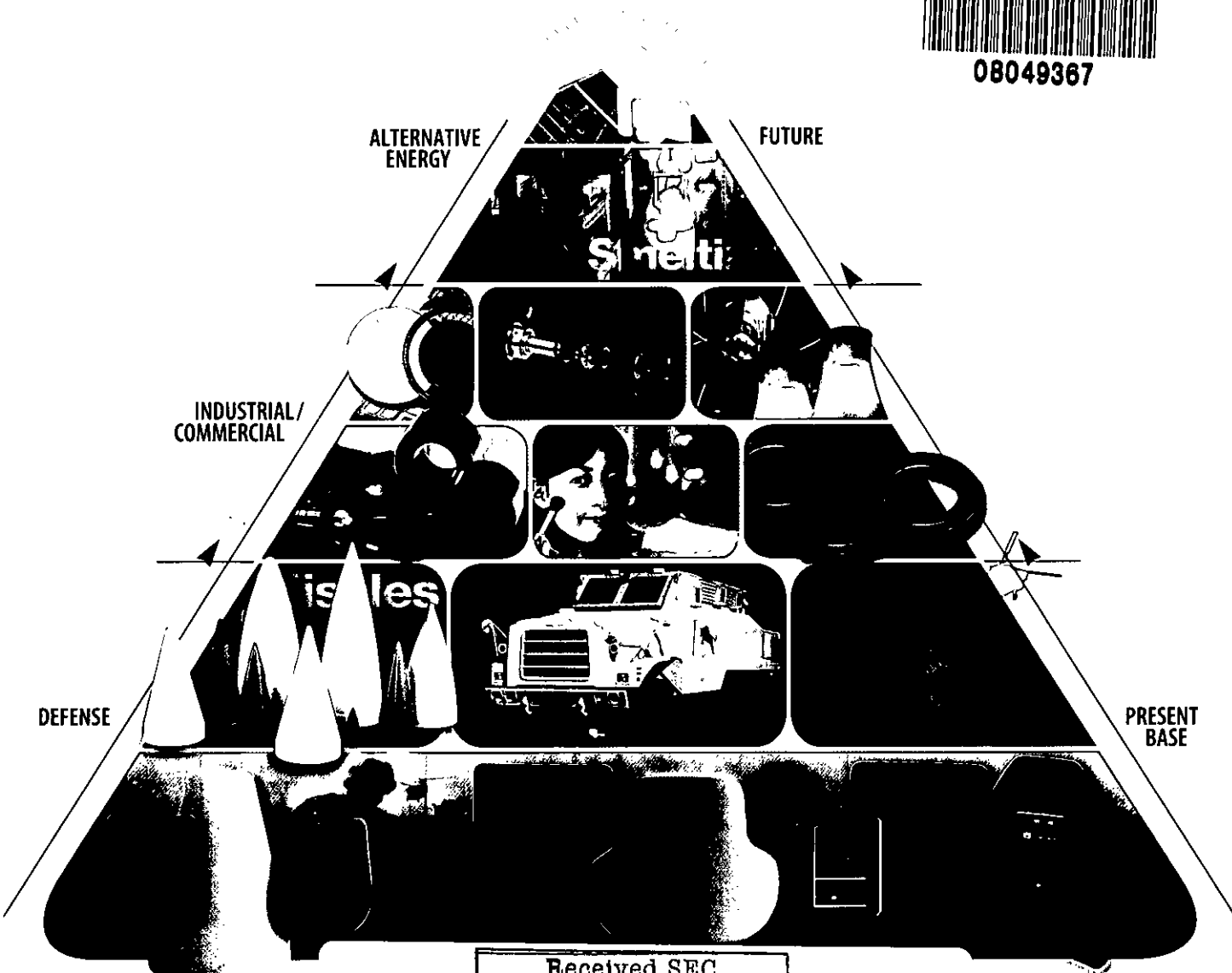




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I C C E S S

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ceradyne, inc.

C O R P O R A T E P R O F I L E

Ceradyne, Inc. develops, manufactures and markets advanced technical ceramic products and components for defense, industrial, automotive/diesel, commercial, solar energy, nuclear power, and other alternative energy applications.

The Company's expertise in ceramic material science, as well as a vertically integrated approach of designing much of its key equipment and controlling the manufacturing process from raw material powders to finished product, allows it to design and manufacture precision, high quality advanced technical ceramic products to meet demanding customer specifications. The Company markets its products to a broad range of industries in 63 countries.

Ceradyne products include lightweight ceramic armor, combat vehicle armor, ceramic crucibles for the solar industry, ceramic orthodontic brackets, diesel engine components, microwave tube parts, evaporation boats for metallizing, surface engineered components, industrial seals, fluid handling components, semiconductor equipment components, nuclear waste containment components and materials used in precision investment casting.

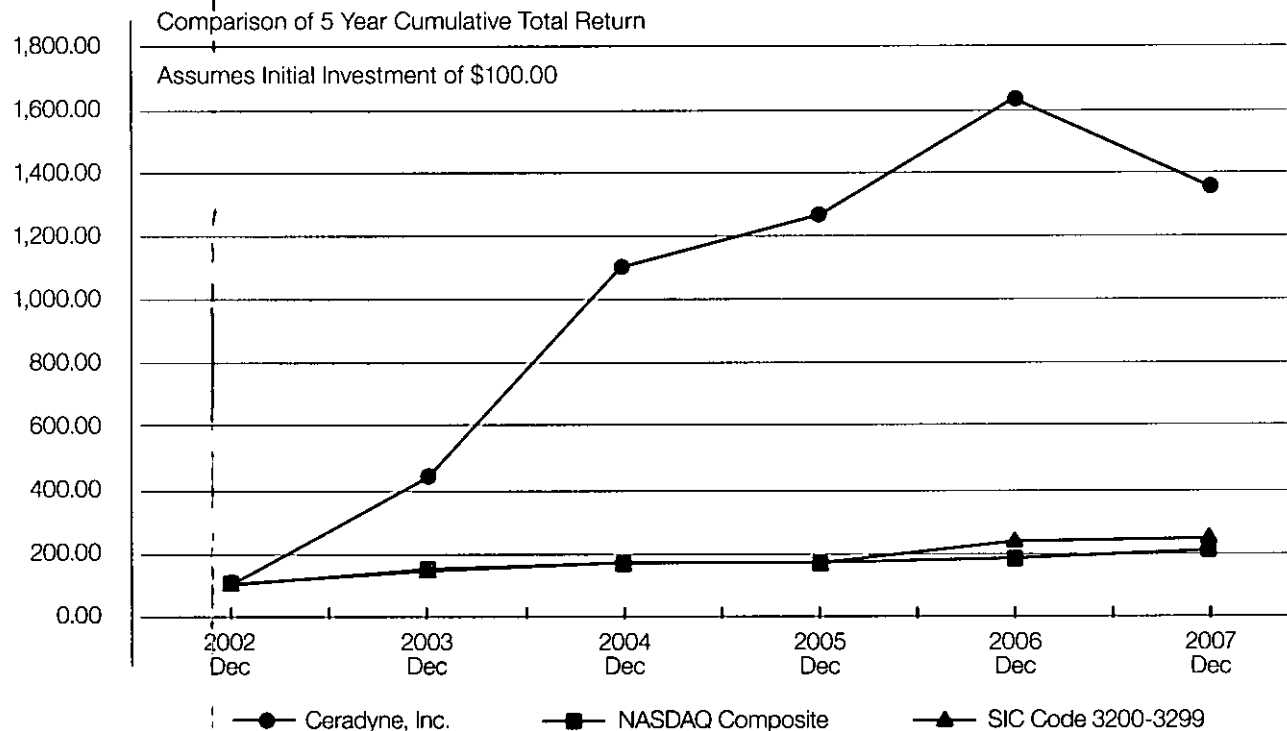
Ceradyne serves a wide range of emerging markets from its domestic and international manufacturing locations and marketing offices.

FINANCIAL HIGHLIGHTS

		Years Ended December 31,		
		2007	2006	2005
For the Year	Amounts in thousands, except per share data			
	Net sales	\$ 756,835	\$ 662,888	\$ 368,253
	Income from operations	220,778	192,776	81,628
	Income before provision for income taxes	226,543	194,559	73,230
	Provision for income taxes	82,278	66,155	26,452
	Net income	144,265	128,404	46,778
	Basic net income per share	5.29	4.77	1.90
	Diluted net income per share	5.20	4.69	1.86
	Working capital	353,923	332,063	212,309
	Total assets	783,286	613,815	430,193
	Total long-term debt	121,000	121,000	121,000
	Stockholders' equity	\$ 578,629	\$ 406,611	\$ 250,520

COMPANY STOCK PERFORMANCE GRAPH

DECEMBER 2007



The above graph shows a comparison of the cumulative total return to stockholders of the Company, the Nasdaq Stock Market (U.S. Companies), and the Nasdaq stocks (SIC 3200-3299 U.S. Companies, stone, clay, glass and concrete products) from December 31, 2002 to December 31, 2007.

LETTER TO OUR SHAREHOLDERS



"Ceradyne has selected 'The Pyramid of Ceramic Success' as the theme for the 2007 Annual Report. It illustrates in a distinctive visual manner Ceradyne's strategy of using the foundation of our defense business to support the growth of our commercial and industrial product lines which will ultimately evolve into the use of our advanced technical ceramics for alternative energy applications".

Joel P. Moskowitz

*Chief Executive Officer, President,
Chairman of the Board*

In 2007, we continued to set record financial results while making significant progress in diversifying our product base by increasing our non-defense sales and making progress on our goal of relying less on lightweight ceramic body armor. Our success with solar energy-related ceramic crucibles represents the most explosive growth opportunity within Ceradyne's product lines. We also find the technical success of the "BULL™" armored combat vehicle and the U.S. Military's recent selection of Team Bull (Ceradyne, Oshkosh Truck and Ideal Innovations) as a finalist in the procurement cycle encouraging signs as we enter this large market. Finally, our two 2007 acquisitions, EaglePicher Boron (now Ceradyne Boron Products) and Minco, are performing ahead of expectations.

It is interesting to note the synergies that are now developing based on our acquisitions. For example, Minco is developing additional quality and capacity for solar cell crucibles, while at the same time the research group at ESK has developed a proprietary (patent pending) coating for these same crucibles, resulting in improvement to this already leading quality product. This year's letter to shareholders contains the following:

- ▶ Financial Highlights
- ▶ A discussion of these key 2007 activities:
 - ▶ Expansion of our Solar Energy Product Line
 - ▶ Expansion of our ESK Ceramics' Fluid Handling Ceramic and Boroneige® Cosmetic Powder Product Lines
 - ▶ Acquisition of EaglePicher Boron and Minco
 - ▶ Progress on Two Billion-Dollar Opportunities
- ▶ Our strategy for 2008 and Beyond

FINANCIAL HIGHLIGHTS

Sales for 2007 increased to \$756.8 million from \$662.9 million in 2006

Net Income for 2007 increased to \$144.3 million, or \$5.20 per diluted share on 27.7 million shares from \$128.4 million, or \$4.69 per diluted share on 27.4 million shares in 2006

New Bookings for 2007 were \$651.3 million compared to \$730 million in 2006

Backlog at December 31, 2007 was \$239 million compared to \$344 million in 2006

Common Stock Repurchase Program On March 4, 2008, the Company announced that its Board of Directors had authorized the repurchase of up to \$100 million of Ceradyne common stock in open market transactions

2007 ACTIVITIES

SOLAR CERAMIC CRUCIBLES

Approximately eight years ago, Ceradyne Thermo Materials (Atlanta, Georgia) developed a single-use high-purity crucible (container) for melting silicon used in the manufacture of polycrystalline silicon photovoltaic solar cells. Although this solar-related business grew at a rate significantly greater than Ceradyne's other product lines in absolute dollars (\$10.7 million in 2007), its total sales were relatively modest. However, the demand for polycrystalline silicon has increased dramatically and is projected to continue to increase at an annual rate of 35%. To meet this demand, Ceradyne has accelerated its expansion in our Tianjin, China, and Scottdale, Georgia, USA facilities.

On June 20, 2007, Ceradyne opened its wholly owned Chinese-based manufacturing operation in Tianjin, China. This 98,000 square foot modern plant on approximately five acres of land should enable us to increase our shipments of these solar related ceramic crucibles from less than \$11 million in 2007 to over \$50 million in 2008. Furthermore, early in 2008, Ceradyne acquired twelve more acres in China and is erecting an additional 200,000 square foot manufacturing plant dedicated primarily to solar energy products. We believe the new factory will begin production in early 2009 and its capacity, together with our added capacity stateside, should allow us to double 2008 shipments to more than \$100 million in 2009.



Ceradyne Expands Solar Effort in China
Dave Reed, Ceradyne Vice President (rear left),
Jerrold Pellizzon, Ceradyne CFO (second from rear right)
and Joel Moskowitz, CEO (front right) sign agreement with
Chinese authorities acquiring additional land in Tianjin, China.

EXPANSION OF ESK CERAMICS, KEMPTEN, GERMANY

In 2007, Ceradyne's wholly owned German subsidiary began a major expansion at its Bavarian location. This included acquisition of 45,000 square feet of additional buildings and six acres of land as well as construction of 26,000 square feet of manufacturing space. Additionally, ESK Ceramics installed proprietary equipment, including a unique furnace for the fabrication of boron nitride. Total cost is estimated at \$25 million, with a completion date of early 2008.

The motivating force for this expansion is the increasing demand for ESK Ceramics' industrial fluid handling ceramic components (silicon carbide) and its recently introduced Boroneige® cosmetic product line (boron nitride). We estimate that the capacity added by this expansion can generate approximately \$25 million of product shipments dependent on demand.

ACQUISITION OF EAGLEPICHER BORON

In August 2007, Ceradyne acquired EaglePicher Boron of Quapaw, Oklahoma, for \$71 million. We have renamed this operation "Ceradyne Boron Products" and believe its ten story "separation facility" is the largest in the world for the production of the isotopes of the element boron, ^{10}B and ^{11}B . We believe we are currently producing about 75% of the world's demand for these materials. The two major markets for these isotopes are:

- ▶ **Nuclear Applications.** The isotope ^{10}B is a neutron absorber, **500% more effective than naturally occurring boron.** Therefore, it can be incorporated into aluminum containment systems for storage of spent nuclear fuel rods or added to the coolant water in nuclear reactors. Nuclear energy is a growth market and Ceradyne's boron isotope capacity is expected to allow us to participate in a steady and repetitive market. It currently represents about 40% of Ceradyne Boron Products' annual sales.
- ▶ **Semiconductor "Doping."** Isotope ^{11}B is a primary additive in silicon to convert silicon into a semiconductor. Ceradyne Boron Products produces and markets various boron compounds for the semiconductor market, which is about 40% of Ceradyne Boron Products' annual sales, and is expected to grow as additional boron compounds are developed by Ceradyne.

-
- **Additional Boron Compounds.** We are currently performing boron-based R&D to develop compounds for new applications, such as concentrating radiation beams to treat cancerous tumors and other boron-based semiconductor related compounds.

ACQUISITION OF MINCO

In July 2007, Ceradyne acquired Minco of Midway, Tennessee, for \$27.3 million. Minco is a primary producer of fused silica powders and similar ceramic powders used in precision investment casting (PIC). Minco is the main supplier to Ceradyne Thermo Materials of raw materials for the fabrication of solar cell related ceramic crucibles in Atlanta, Georgia, and Tianjin, China.

The acquisition of Minco results in a reliable supply of the raw material fused silica grain for Ceradyne's highest growth business—solar energy. This vertical integration is similar to our 2004 acquisition of ESK Ceramics which ensured a large and reliable supply of boron carbide, the starting powder for ceramic armor.

BILLION DOLLAR OPPORTUNITIES

We believe there are two markets that have the potential for Ceradyne to reach a billion dollars per year in revenues.

- Armor for military combat vehicles
- Ceramic for aluminum smelting

Vehicle Armor: In 2007, Ceradyne teamed with Oshkosh Truck Company of Oshkosh, Wisconsin, and Ideal Innovations, Inc. of Arlington, Virginia (Team Bull), to build a state-of-the-art armored vehicle capable of defeating the most lethal weapon currently used in Iraq, the Explosively Formed Penetrator (EFP). The name given to this MRAP II (Mine Resistant Ambush Protected) vehicle is the BULL™.

Based on a marketing study Ceradyne has commissioned, we feel there are at least 12 combat vehicle types that will be produced in the next few years requiring armor.

Aluminum Smelting: There are over 30,000 aluminum smelters worldwide that melt the composition aluminum oxide (obtained from bauxite) in an electrically heated "cell." The process requires a great deal of electricity, creates greenhouse gases, and is inherently difficult because of the corrosive and other unwanted reactions occurring in molten aluminum.

Ceradyne and its wholly owned subsidiary, ESK Ceramics, have developed ceramic solutions for use in electrodes and the smelter's side wall construction that will significantly lower electricity requirements, reduce greenhouse gas emissions, increase yields, and prolong cell life.

Although this project must be viewed as early in development (production is three or more years away), the potential tonnage of our ceramic products could eventually create over a billion dollars in annual revenues.

S T R A T E G Y

Ceradyne's strategy is clear and well defined. Our strong cash position should allow us to acquire both defense and non-defense companies as we did in 2007. We will continue to produce lightweight ceramic body armor plates, such as the current ESAPI (Enhanced Small Arms Protective Inserts) and the anticipated new XSAPI body armor solutions while increasing our non-body armor business through acquisitions and the introduction of new or modified products.

We plan to continue our R&D spending, particularly in areas we believe are closest to generating sales and earnings; these include solar, vehicle armor, aluminum smelting, and innovative semiconductor applications.

LEADERSHIP


In 2007 our Chief Technology Officer, Dr. Thomas Juengling, was promoted to President of ESK Ceramics in Kempten, Germany, and became a Ceradyne Corporate Vice President. Early in 2008, Mr. Thomas Cole, formerly President of Ceradyne's most recent acquisition, Minco, was appointed Ceradyne Vice President Business Development.

In the 40 years since I founded Ceradyne in August 1967, it has become clearer and clearer that in addition to the obvious—technology, capital, markets, manufacturing capacity, etc.—nothing happens in a growth company without good leadership and dedicated, skilled employees. Our people drive our success. I thank you.

I eagerly look forward to Ceradyne's future.

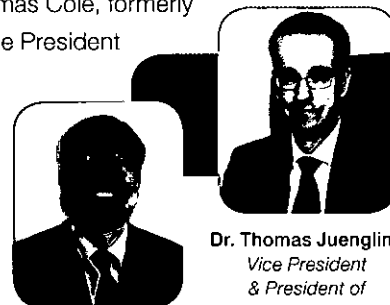
Very truly yours,

CERADYNE, INC.



Joel P. Moskowitz

Chief Executive Officer, President, Chairman of the Board



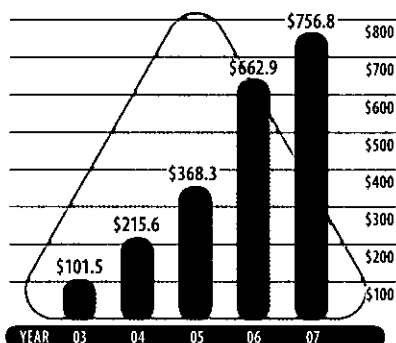
Thomas Cole
Ceradyne Vice President
Business Development

Dr. Thomas Juengling
Vice President
& President of
ESK Ceramics

FINANCIAL RESULTS

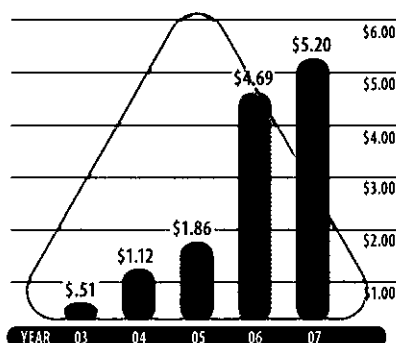
SALES

(\$ in Millions)



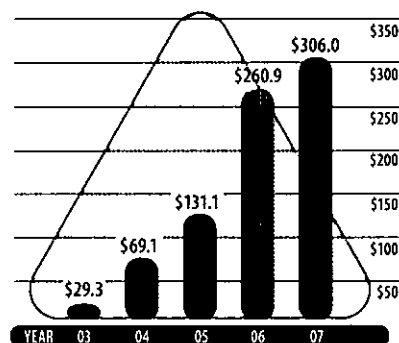
EARNINGS PER SHARE

(Fully Diluted)



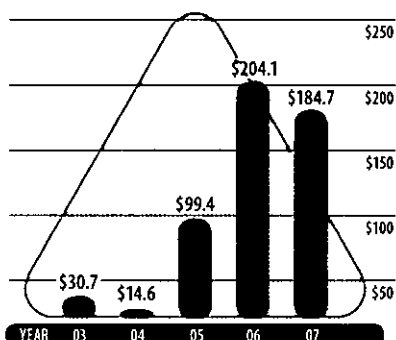
GROSS PROFIT

(\$ in Millions)



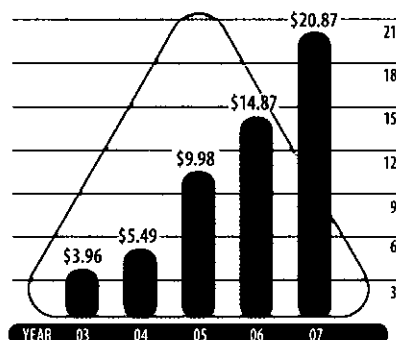
CASH and SHORT TERM INVESTMENTS

(\$ in Millions)



BOOK VALUE

(Per Fully Diluted Shares)



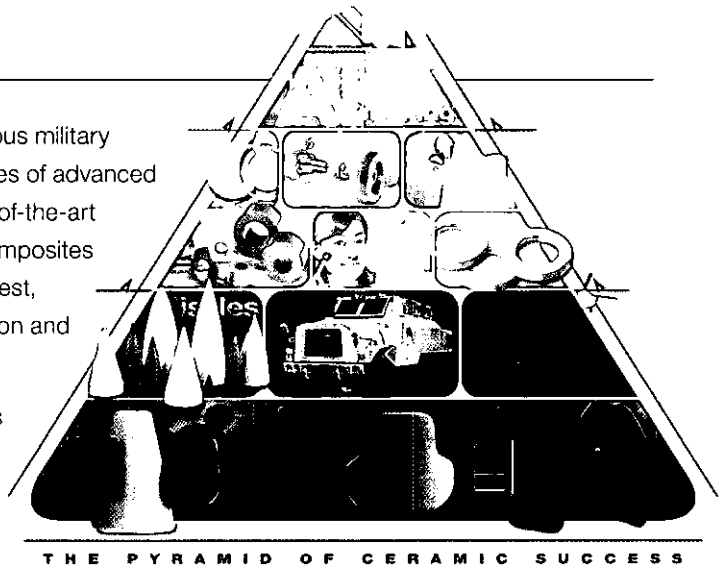
 ceradyne, inc.

DEFENSE

Ceradyne has been fabricating ceramic components for various military applications since its founding in 1967. The unusual properties of advanced technical ceramics allow military equipment to achieve state-of-the-art performance not attainable with other materials, including composites and steel. Advanced technical ceramics are among the hardest, lightest, toughest (fracture energy), high temperature, corrosion and erosion resistant materials known to man.

Early in Ceradyne's history, we provided proprietary ceramics for use in nuclear weapons. In the 1970s and 1980s, Ceradyne's major customer during the cold war was the Department of Energy. In the 1980s, Ceradyne participated with the U.S. Army in determining a wide range of ballistic ceramic system data bases. We helped determine answers to fundamental questions regarding ballistics: What stops what threat? At what areal density? At what cost?

Today, defense products make up well over 60% of the Company's revenues. Due to the world's troubled state of affairs and the projected continuation of terrorist activities, we believe the markets for Ceradyne military products will continue to grow into the future, especially in the area of armored combat vehicles.



BODY ARMOR

In modern combat, a soldier may have to carry up to 120 pounds of gear. Therefore, weight and ballistic stopping power become the overriding criteria for personnel armor. A knight in shining steel armor (at 8gms/cc) wouldn't stand a chance against Ceradyne boron carbide lightweight ceramic body armor (at 2.5gms/cc).

Ceradyne began developing its lightweight ceramic body armor systems in the 1980s. The experience we gained from manufacturing armor for military helicopters was put to good use as the requirements for individual soldier protection were recognized.

Initially, our ceramic body armor was used in limited quantities in the U.S. and with the British Ministry of Defense (to protect against sniper fire in Northern Ireland). However, American losses in Mogadishu, Somalia, in 1993 against conventional AK47 fire began a process whereby the military recognized the need for a comfortable lightweight armor system that could defeat automatic-weapons fire at point blank range.

Our first production personnel ceramic armor contract was received from the Special Operations Command for SPEAR body armor in 1998. Since then, we have qualified and supplied various body armor systems including SAPI (Small Arms Protective Inserts), ESAPI (Enhanced Small Arms Protective Inserts), and ESBI (Enhanced Side Ballistic Inserts). We have also developed an XSAPI system to defeat future, more lethal threats.

To date, Ceradyne has shipped over \$1.5 billion of body armor.



VEHICLE ARMOR

There is a growing need for armor on many new and proposed military combat vehicles. Recently, *Defense News* has estimated a market requirement of 40,000 vehicles and a study commissioned by Ceradyne focused on twelve specific combat vehicle types for future armor consideration.

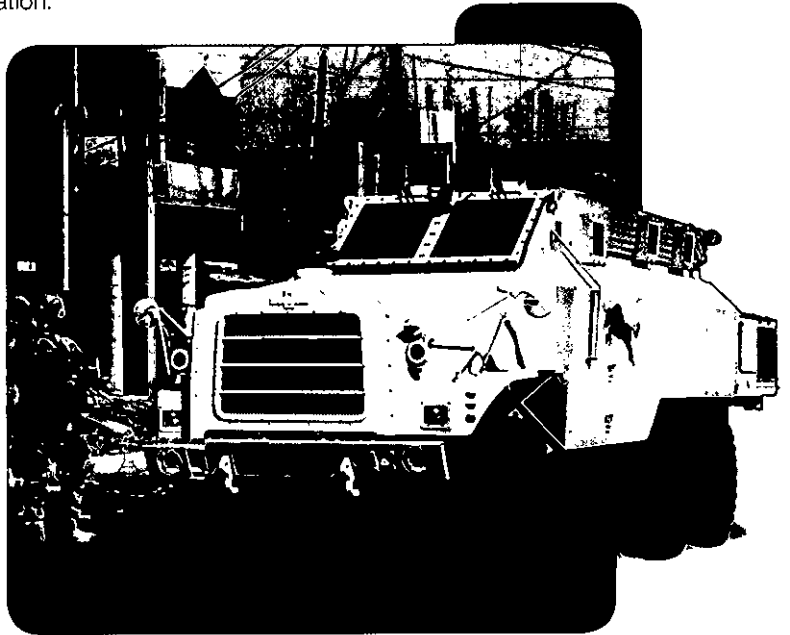
Under the leadership of Ceradyne's Marc King, we have established a military vehicle armor group based in Wixom, Michigan. In 2007, Ceradyne joined with Oshkosh Truck Corporation and Ideal innovations, Inc. to form Team Bull (see BULL™ right). We expect a decision on BULL™ production in 2008.

Ceradyne's rationale for pursuing vehicle armor is:

- **Market Size.** Whereas ceramic armor inserts for body armor are less than \$2,000 per solider, vehicle armor systems range to almost \$400,000 per vehicle, making the market size in the low billions of dollars.

We also believe that terrorist tactics create a demand for armored vehicles in order to provide our military with necessary protection.

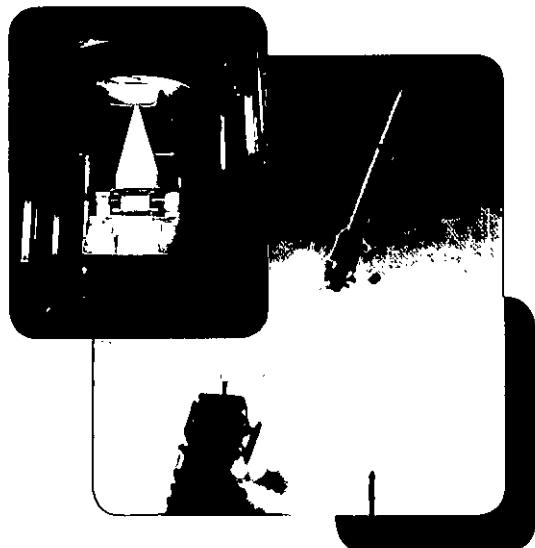
- **Ceradyne Technology.** Ceradyne's lightweight armor systems have been certified as Long Term Armor Strategy (LTAS) compliant. We believe that our long history of armor development and production will allow us to participate in this growing market. Our ceramic, metal and composite technologies should allow us to develop, market and produce state-of-the-art vehicle solutions for deadly threats, including EFP (Explosively Formed Penetrator).



MISSILE RADOMES (Nose Cones)

The electronic transparency of ceramics, coupled with their structural and chemical stability, allows advanced technical ceramics to be used as the nose cone on high-speed missiles. Ceradyne has been developing, manufacturing and precision diamond grinding missile radomes for over a decade. We are currently in a multi-year contract on Lockheed's PAC-3 Missile Program. We expect to be delivering PAC-3 nose cones for many years.

Our Atlanta, Georgia, facility represents the state-of-the-art in the production of ceramic nose cones.

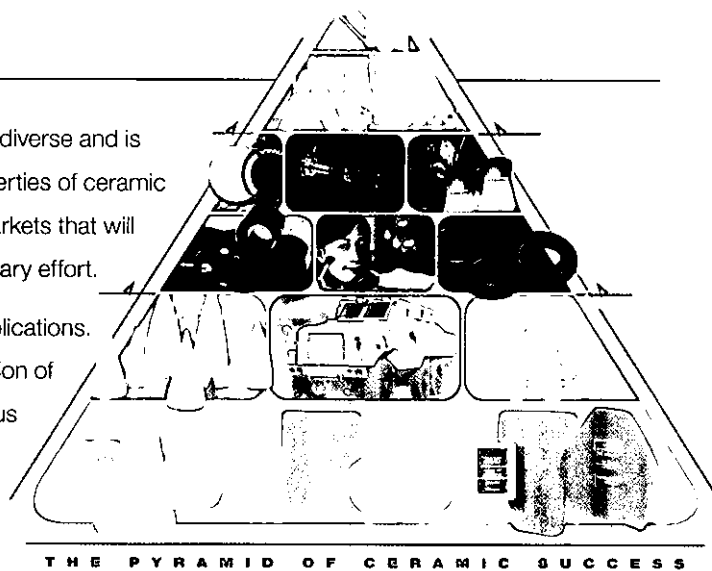


INDUSTRIAL

The industrial market for advanced technical ceramics is very diverse and is often dependent on the erosion resistance and frictional properties of ceramic components. Ceradyne's strategy is to focus on industrial markets that will provide a base of reasonable growth to balance our large military effort.

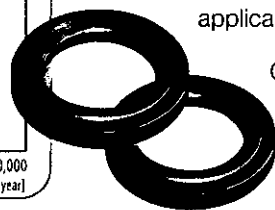
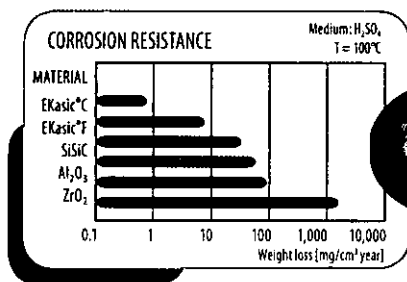
Over 80% of ESK Ceramics' sales are related to industrial applications.

Prior to Ceradyne's acquisition of ESK in 2004, a high proportion of those sales were in Europe. With an increased marketing focus in the United States and Asia, we now anticipate that ESK's industrial sales will increase to over \$125 million in 2008.



FLUID HANDLING

Industrial pumps often require extremely durable seals and bearing surfaces. Because these components must operate for extended time periods at high rotational speeds and under significant mechanical stresses, they may require ceramic surfaces in critical areas. ESK Ceramics has developed a series of robust silicon carbide (EKasic®) seals and bearings for the most critical applications while in contact with various liquids.



Our facility in Bazet, France, and our recently expanded capacity in Kempton, Germany, are designed to meet the anticipated growth of this market.

SURFACE ENGINEERING

ESK Ceramics has developed a technology that allows it to produce components with a controlled surface which, in turn, dictates the frictional or "holding" properties of the component. When produced in the shape of a conventional washer or shim, these parts act as a lightweight fastener. When compared to other competitive fasteners, such as conventional lock nuts or star washers, the Ceradyne product can have as much as a threefold advantage as it relates to performance.

The Ceradyne/ESK marketing staff is accelerating its efforts to expand the market for this innovative product.



CERAMIC ORTHODONTIC BRACKETS

In the late 1980s, Ceradyne developed "Transtar," a translucent ceramic. In conjunction with the Unitek division of the 3M Company, we used our Transtar technology to design and produce ceramic orthodontic brackets to be sold by Unitek under its "Clarity™" brand. Recently, Unitek has introduced a next generation aesthetic ceramic orthodontic bracket that is self-ligating known as "Clarity SL." Ceradyne looks forward to continuing its 20 year relationship with Unitek.



METALLURGY/ALUMINUM SMELTING

Refractory ceramics are traditionally used to line furnaces, provide holding cells and molten metal molds, and other applications requiring extremely high temperatures and structural and chemical resistance to molten steel or particularly molten aluminum. In general, the melting point of ceramics, especially certain advanced technical ceramics, is always higher than the melting point of metals.

In the past, Ceradyne has participated in special metallurgical applications incorporating its boron nitride, titanium diboride and other non-oxide compounds. Uses included "side dams" to facilitate the continuous casting of steel.

However, in recent years, as the price of oil soared and an awareness of the problems with carbon dioxide emissions became increasingly recognized, the world's increasing demand for aluminum caused the giant smelters to seek improved methods of obtaining the lightweight metal—aluminum. Ceradyne's unique primary powder and shape manufacturing facility in Kempton, Germany, is being tasked to develop and manufacture ceramic powder and parts for next generation Hall-Heroult aluminum smelters.

Ceradyne ceramic compositions that are electrically conductive yet withstand molten aluminum and the molten flux, cryolite, may lay the foundation of a dramatically improved method for producing aluminum. The ultimate goal is reduced electricity, high productivity per each smelting cell, and a clean environment.



BORONEIGE®

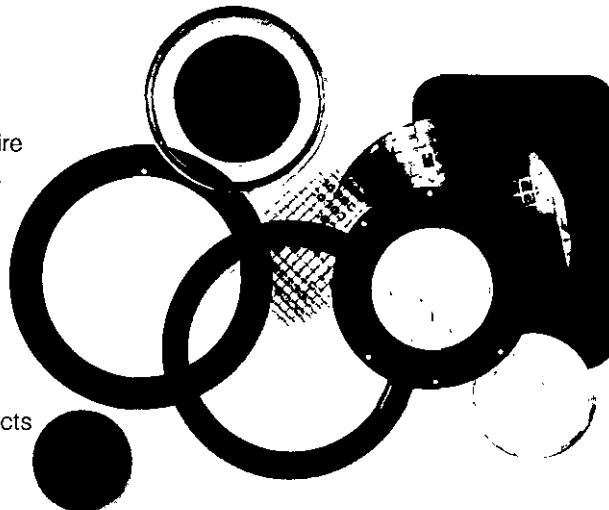
ESK Ceramics produces a silky smooth, inert, fine-grained, white powder that has been branded Boroneige®. Boroneige is an excellent cosmetic base ingredient for a wide range of "beauty" products, including rouge, lipstick, wrinkle creams and various other facial and hand products. In order to meet demand in this relatively new Ceradyne market, we have expanded our Kempton, Germany, facility. As part of the expansion, we have engineered and installed a new furnace designed to triple productivity.



SEMICONDUCTOR

Semiconductor equipment, particularly etch chambers, require ceramic components to position and shield the semiconductor wafer during the processing. Ceradyne has developed a series of specially formulated compositions to operate in the severe etch environment. Our ability to produce large shapes, diamond machined to precision tolerances (right), allows us to participate in this market.

We anticipate the 2007 acquisition of Ceradyne Boron Products will allow us to further penetrate this market.



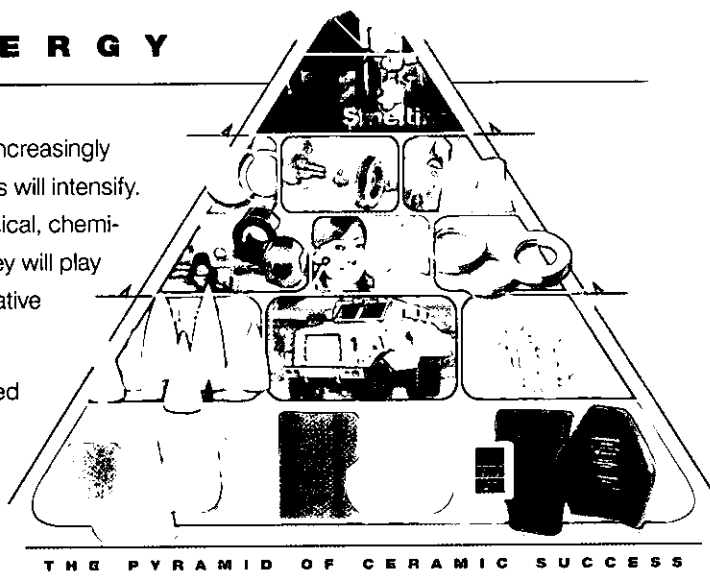
 ceradyne, inc.

ALTERNATIVE ENERGY

With oil over \$100 per barrel and the modern world economy increasingly dependent on energy, the search for alternative energy sources will intensify. Because of the high temperature resistance and other mechanical, chemical and nuclear properties of advanced technical ceramics, they will play an increasingly important role in the coming years in the alternative energy markets.

Ceradyne is targeting several of these markets for its advanced technical ceramics, namely:

- ▶ Ceramic crucibles for photovoltaic solar cell fabrication
- ▶ Boron and enriched boron components for nuclear containment
- ▶ Ceramic balls and other erosion resistant parts for windmill bearings
- ▶ Ceramics for non-conventional oil recovery particularly tar sands and tar shale



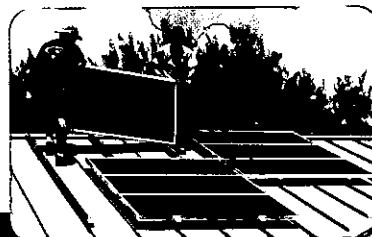
SOLAR

When sunlight strikes silicon, the photons impact electrons creating electricity. Solar energy is the world's fastest growing energy technology, having grown an average of 48% per year since 2002. However, even with this dramatic growth, solar energy in 2004 accounted for only .04% of the world's total energy supply.

We believe solar energy will continue to grow rapidly, with growth estimated at 35% per year.

Ceradyne has determined to focus on a specific photovoltaic solar cell technology, polycrystalline silicon. The use of polycrystalline silicon is estimated to be over 60% of the market for creating electricity via photovoltaic silicon.

Ceradyne's role is to provide extremely high-purity, large, fused silica ceramic crucibles (bottom left) for the melting of the silicon during the manufacturing process. The process itself results in single use of the ceramic crucible. The growth of the solar market, coupled with the "**non-reusable**" nature of the ceramic crucible, is creating a significant demand for Ceradyne's product.

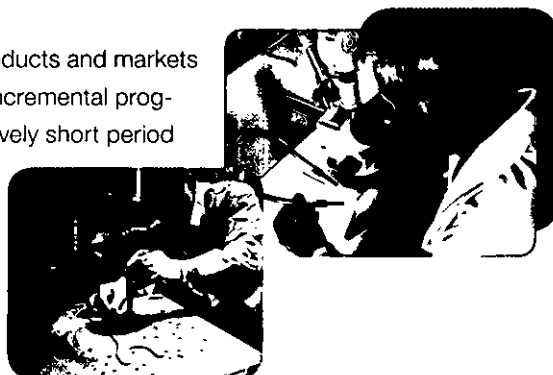


RESEARCH & DEVELOPMENT

Ceradyne commits approximately 4% of its annual sales budget to R&D. Although many of Ceradyne's profit centers perform R&D directly related to their individual product lines, the major Ceradyne R&D centers are located in Costa Mesa, California, and Kempten, Germany.

Most of Ceradyne's R&D is product oriented and often addresses products and markets where the Company already has established a presence and where incremental progress or new disruptive technology can be brought to market in a relatively short period of time.

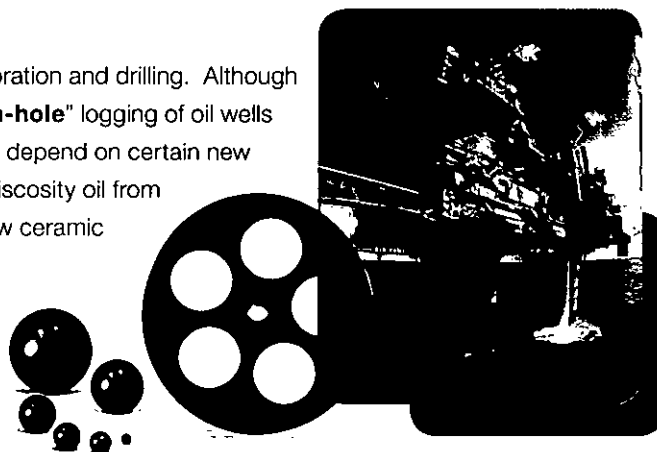
We currently employ over 15 scientists with Ph.Ds and believe our ceramic analysis facilities are state-of-the-art. Ceradyne's recent development of a non-reactive proprietary coating for our solar cell related crucibles is an example of a Ceradyne success story.



OIL DRILLING

Ceradyne is participating in several areas related to oil exploration and drilling. Although we have provided precision ceramic components for "down-hole" logging of oil wells for some time, we believe that substantive future growth will depend on certain new proprietary ceramic products: One, the extraction of high viscosity oil from tar sands and tar shale, and the second opportunity is a new ceramic bearing system used to support the drilling shaft in the field.

The high price of oil, together with increasing demand for environmentally friendly technology, may provide Ceradyne new business opportunities in the "oil patch" over the next few years.



NUCLEAR

There is a worldwide increase in the licensing, construction and planning of nuclear electricity-generating power plants. Over 80% of the electricity in France is generated by nuclear reactors. In the United States, over 30 nuclear reactors are in some stage of planning or approval.

Ceradyne is focused on controlling radiation in the reactor itself, as well as the safe long-term storage of spent nuclear fuel rods. Natural boron as well as the isotope ^{10}B absorbs neutrons. Ceradyne's extensive experience with natural boron compounds and its ability to generate boron isotopes at Ceradyne Boron Products will provide the necessary raw materials to our Ceradyne Canada operation in order to fabricate the nuclear waste containment components.



SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2007

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file number 000-13059

CERADYNE, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
Incorporation or organization)

33-0055414

(I.R.S. Employer
Identification No.)

3169 Red Hill Avenue, Costa Mesa, California

(Address of principal executive offices)

92626

(Zip Code)

(714) 549-0421

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class:

Name of Each Exchange on Which Registered:

Common Stock, par value \$0.01 per share

The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act of 1933. YES ☒ NO ☐

Indicate by check mark whether the registrant is not required to file reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934. YES ☐ NO ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports); and (2) has been subject to such filing requirements for the past 90 days. YES ☒ NO ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of registrant's common stock held by non-affiliates as of June 30, 2007 (the last business day of registrant's most recently completed second fiscal quarter) was approximately \$1.9 billion.

As of February 21, 2008, there were 27,326,680 shares of registrant's Common Stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE: Portions of registrant's definitive proxy statement for its annual meeting of stockholders to be held on June 10, 2008 are incorporated by reference into Part III of this Form 10-K.

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PART I

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are those that predict or describe future events or trends and that do not relate solely to historical matters. You can generally identify forward-looking statements as statements containing the words “believe,” “expect,” “will,” “anticipate,” “intend,” “estimate,” “project,” “plan,” “assume” or other similar expressions, or negatives of those expressions, although not all forward-looking statements contain these identifying words. All statements contained in this report regarding our future strategy, future operations, projected financial position, estimated future revenues, projected costs, future prospects, the future of our industries and results that might be obtained by pursuing management’s current plans and objectives are forward-looking statements.

You should not place undue reliance on our forward-looking statements because the matters they describe are subject to known and unknown risks, uncertainties and other unpredictable factors, many of which are beyond our control. Our forward-looking statements are based on the information currently available to us and speak only as of the date of the filing of this report. New risks and uncertainties arise from time to time, and it is impossible for us to predict these matters or how they may affect us. Over time, our actual results, performance or achievements will likely differ from the anticipated results, performance or achievements that are expressed or implied by our forward-looking statements, and such difference might be significant and materially adverse to our security holders. We do not undertake and specifically decline any obligation to update any forward-looking statements or to publicly announce the results of any revisions to any statements to reflect new information or future events or developments.

We have identified some of the important factors that could cause future events to differ from our current expectations and they are described in this report in Item 1A under the caption “Risk Factors,” in Item 7 under the caption “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and in Item 7A under the caption “Quantitative and Qualitative Disclosures About Market Risk,” all of which you should review carefully.

ITEM 1. *BUSINESS*

Introduction

We develop, manufacture and market advanced technical ceramic products, ceramic powders and components for defense, industrial, automotive/diesel and commercial applications.

In many high performance applications, products made of advanced technical ceramics meet specifications that similar products made of metals, plastics or traditional ceramics cannot achieve. Advanced technical ceramics can withstand extremely high temperatures, combine hardness with light weight, are highly resistant to corrosion and wear, and often have excellent electrical insulation capabilities, special electronic properties and low friction characteristics.

Our products include:

- lightweight ceramic armor for soldiers and other military applications;
- ceramic industrial components for erosion and corrosion resistant applications;
- ceramic powders, including boron carbide, boron nitride, titanium diboride, calcium hexaboride, and zirconium diboride, which are used in manufacturing armor and a broad range of industrial products; and BORONEIGE® boron nitride powder for cosmetic products;
- evaporation boats for metallization of materials for food packaging and other products;
- durable, reduced friction, ceramic diesel engine components;
- functional and frictional coatings primarily for automotive applications;

- translucent ceramic orthodontic brackets;
- ceramic-impregnated dispenser cathodes for microwave tubes, lasers and cathode ray tubes;
- ceramic crucibles for melting silicon in the photovoltaic solar cell manufacturing process;
- ceramic missile radomes (nose cones) for the defense industry;
- fused silica powders for industrial applications and ceramic crucibles;
- neutron absorbing materials, structural and non-structural, in combination with aluminum metal matrix composite that serve as part of a barrier system for spent fuel wet and dry storage in the nuclear industry, and non-structural neutron absorbing materials for use in the transport of nuclear fresh fuel rods;
- nuclear chemistry products for use in pressurized water reactors and boiling water reactors; and
- boron dopant chemicals for semiconductor silicon manufacturing and for ion implanting of silicon wafers.

Our customers include the U.S. government, prime government contractors and large industrial, automotive, diesel and commercial manufacturers in both domestic and international markets.

The principal factor contributing to our recent growth in sales is increased demand by the U.S. military for ceramic body armor that protects soldiers. This increased demand has been driven by a growing recognition of the performance and life saving benefits of utilizing advanced technical ceramics in lightweight body armor. In addition, the market for ceramic body armor increased further beginning in 2006 with the introduction of enhanced side ballistic inserts, known as ESBI, which protect the side areas of the soldier's torso. Recent military conflicts in Iraq and Afghanistan, as well as an increasingly unstable geopolitical climate and the heightened risk of international conflicts, have resulted in increased orders for these products. We believe that our ability to produce and deliver large quantities of ceramic body armor has led to increased orders for our products. However, shipments and orders for the current generation ESAPI (enhanced small arms protective inserts) body armor for the U.S. Army, which represented 40.3% of our total revenues in 2007 and 57.0% of our total body armor shipments in 2007 may end in 2008. We believe we will continue to supply ESAPI body armor to other U.S. military customers besides the U.S. Army throughout 2008. In response to a solicitation notice from the U.S. Army regarding the next ballistic threat generation of body armor, known as XSAPI, we submitted our quotation for this procurement in February 2008. Government contracts for ceramic armor generally are awarded in an open competitive bidding process. Our future level of sales of ceramic body armor will depend on the U.S. military's continued demand for these products and our ability to successfully compete for and retain this business.

Our sales also increased from 2004 through 2007 because of our acquisition of ESK Ceramics on August 23, 2004, our acquisition of Minco, Inc. on July 10, 2007 and our acquisition of EaglePicher Boron, LLC on August 31, 2007. The operations of ESK Ceramics have been consolidated with ours since September 1, 2004. The operations of Minco, Inc. have been consolidated with ours since July 10, 2007, and the operations of EaglePicher Boron have been consolidated since September 1, 2007.

As a result of the ESK acquisition, we believe that we are the only ceramic body armor manufacturer with a vertically integrated approach of designing much of our key equipment and controlling the manufacturing process from the principal raw material powder to finished product.

Our new Minco operation manufactures fused silica powders for a wide range of industrial applications and is a key supplier of this raw material to our Thermo Materials division. EaglePicher Boron, LLC, which we have renamed Boron Products, LLC, produces the boron isotope ¹⁰B. This isotope is a strong neutron absorber and is used for both nuclear waste containment and nuclear power plant neutron radiation critical control. Our Boron Products subsidiary produces complementary chemical isotopes used in the normal operation and control of nuclear power plants. Boron Products also produces the boron isotope ¹¹B, which is used in the semiconductor manufacturing process as an additive to semiconductor grade silicon as a "doping" agent and where ultra high purity boron is required. We anticipate that Boron Products will further strengthen

our entry, announced during 2006, into the nuclear waste containment and other nuclear power plant related ceramic materials markets.

We believe that numerous applications for ceramic products and technology have the potential to drive long-term growth of our business. Examples of applications for which we have developed or are currently developing products include:

- lightweight ceramic armor for military vehicles, boats and aircraft;
- ceramic components that have the potential to facilitate the extraction of oil from oil sands on a cost-effective basis;
- ceramic materials that have the potential to reduce significantly the cost of producing molten aluminum;
- chemical micro reactors, heat exchangers and hydraulic trim valves produced with our proprietary technology that have the potential to provide an economical substitute for steel in extreme environments;
- high purity fused silica ceramic crucibles used by several photovoltaic cell manufacturers in their silicon melting operation in order to produce polycrystalline silicon storage containers;
- storage containers made with our boron carbide powder that have the potential to be used for long-term containment of nuclear waste from nuclear power plants; and
- small complicated ceramic components made using our injection molding technology that have the potential to be used as medical implants.

To meet increasingly higher performance standards, advanced technical ceramics have stringent technical manufacturing requirements. We have designed and customized our facilities and capital equipment to enhance our advanced technical ceramic manufacturing processes. We have also implemented lean manufacturing initiatives to lower costs and drive further efficiencies in our manufacturing processes, and are expanding our facilities to add manufacturing capacity.

In July 2007, we entered into an agreement with Ideal Innovations, Inc. and Oshkosh Truck Corporation to further develop, produce and market an armored military vehicle we call the Bull™. The Bull™ armored vehicle is intended to address the increasing need for protection from improvised explosive devices known as IED's, mine blasts and high-threat, explosively formed projectiles, known as EFP's, and will be built on a combat-proven Oshkosh Truck chassis. The Bull™ armored solution, conceived by Ideal Innovations in 2005 and developed with Ceradyne in 2006, has been tested by the Army Test Center, Aberdeen, Maryland, and demonstrated to be capable of protecting vehicle occupants against IED, EFP and mine blast threats. It is designed to meet current IED threats, and is intended to withstand the increasingly prevalent and higher EFP threats now faced by the U.S. military. In September 2007, in response to a solicitation notice from the U.S. military regarding Mine Resistant Ambush Protected Vehicles II Enhanced Vehicle Competition, known as MRAP II, we, together with Ideal Innovations and Oshkosh Truck, submitted a quotation and delivered both a 6-person and a 10-person MRAP II vehicle named the Bull™, to the U.S. Army Aberdeen Test Center for further service evaluation. In December 2007, the U.S. government awarded a delivery order totaling \$18.1 million to Ideal Innovations, Ceradyne and Oshkosh Truck for several 6-person versions and targets of the Bull™ armored vehicle to be used for further government testing. Ideal Innovations is the prime contractor and we are a sub contractor to Ideal Innovations. Whether we receive additional orders for the Bull™ armored vehicle will depend upon the success of these tests, the U.S. military's need and funding for MRAP II armored vehicles, the results of testing of a competitor's MRAP II armored vehicle, and whether our pricing for the Bull™ armored vehicle is competitive.

Ceradyne's design and production contribution to the Bull™ armored vehicle program is based on our experience and expertise learned over many years in developing ceramic armor systems for military helicopters, ground-based vehicles and boats. Due to the ballistic threat level that MRAP II armored vehicles are required to meet, the current design of the Bull™ armored vehicle does not include any ceramic armor.

Although we are engaged in development of ceramic armor systems to use on future versions of the Bull™ armored vehicle, we do not know when or if a ceramic armor solution will be available or whether it would be acceptable to the U.S. military.

We conduct our operations through six operating segments: our Advanced Ceramic Operations division, our ESK Ceramics subsidiary, our Semicon Associates division, our Thermo Materials division, our Ceradyne Canada subsidiary and our Boron Products subsidiary.

Advanced Technical Ceramics

Evolving customer requirements in industrial processing, military systems, microwave electronics, automotive/diesel engine products and orthodontics have generated a demand for high performance materials with properties not readily available in metals, plastics or traditional ceramics. The following table compares favorable typical properties of selected advanced technical ceramics with those of other selected materials.

Materials	Melting Point (Degrees Fahrenheit)	Hardness (Vickers Scale)	Chemical Resistance to Acids	Electrical Properties	Density (Grams per Cubic Centimeter)
Advanced technical ceramics . .	2,500 to 6,900	Up to 3,200	Excellent	From excellent insulators to conductors	2.5 to 4.5
High strength alloy steel	2,500 to 2,700	Up to 900	Fair	Conductors	7.0 to 9.0
High performance plastics	275 to 750	Up to 10	Good to Excellent	Good to excellent insulators	1.0 to 2.0

Ceramics such as earthenware, glass, brick and tile have been made for centuries and are still in common use today. The inertness and lasting qualities of ceramics are illustrated by artifacts uncovered intact in modern times. Almost all traditional ceramics, including those of ancient times, were based on clay. In the last fifty years, significant advances have been made in ceramic technology by applying specialized manufacturing processes to produce synthetic ceramic powders. Developments in aluminum oxide and other oxides resulted in ceramics that were excellent electrical insulators and were capable of withstanding high temperatures. In addition, industry advancements in ceramic material science have led to the development of a class of ceramics that are generally non-oxides, such as carbides, borides and nitrides. These non-oxide ceramics generally have mechanical properties that exceed those of oxide ceramics developed in prior periods. Collectively, these developments resulted in the ability to manufacture ceramics with great strength at elevated temperatures and reduced fragility, historically a primary limitation of ceramics. The products that have emerged from these advances are known as advanced technical (or structural) ceramics.

The properties of advanced technical ceramics present a compelling case for their use in a wide array of modern applications. However, to meet increasingly higher performance standards, advanced technical ceramics have stringent technical manufacturing requirements. First, manufacturers must start with fine synthetic ceramic powders of very high and consistent quality that are produced using a highly technical and specialized manufacturing process. Few suppliers of these high quality starting powders exist today and not all of these suppliers can consistently produce starting powders of the necessary quality and consistency in the volumes required by ceramic manufacturers. Second, the specialized equipment required to manufacture advanced technical ceramics must often be custom designed and is not readily available, requiring a significant investment in capital equipment and facilities to allow volume production. Manufacturing costs associated with the production of these ceramics are higher than those of the materials they replace. A portion of these costs is related to the need for diamond grinding finished components to exacting tolerances. To accelerate the use of advanced technical ceramics as a direct replacement for metals, plastics or traditional ceramics, these manufacturing costs need to be reduced. Cost reduction efforts include the production of blanks or feed stock to "near net shape" configurations in order to reduce the amount of diamond grinding needed. Manufacturers are also seeking to reduce costs through the use of high volume automated processing and finishing equipment and techniques, and to achieve economies of scale in areas such as powder processing, blank fabrication, firing, finishing and inspection.

Our Solution

We develop, manufacture and market advanced technical ceramic products, ceramic powders and components for defense, industrial, automotive/diesel and commercial applications. The table on the following pages illustrates some of the solutions we have designed to meet market opportunities and demands.

Market Opportunity	Demands of the Market	Our Solution
Defense		
Lightweight ceramic body armor and boron carbide powders	Due to the proliferation of automatic weapons in tactical operations and terrorist conflicts, it has become necessary for vests or other armor to stop machine gun bullets while being light enough in weight to allow freedom of movement without undue fatigue.	We have developed lightweight bullet resistant ceramic body armor solutions, including SAPI (small arms protective inserts), ESAPI (enhanced small arms protective inserts), ESBI (enhanced side ballistic inserts) and other systems. These products generally consist of hot pressed Ceralloy® 546 (boron carbide) or hot pressed Ceralloy® 146 (silicon carbide) and other ceramic coupled with backings such as Dyneema® or Spectra Shield® purchased from third parties. Our subsidiary, ESK Ceramics, is a major manufacturer of boron carbide powders, which are used by us and our competitors to manufacture lightweight ceramic body armor.
Lightweight ceramic armor for military ground-based vehicles, boats and aircraft	Military ground-based vehicles, boats and aircraft require protection against automatic weapons. Weight, cost and vehicle compatibility are critical technical parameters.	We have developed a series of lightweight, cost effective ceramic armor systems and attachment mechanisms that have multi-hit protection at various threat levels and can be added to an existing vehicle or designed into new vehicles, boats and aircraft.
Missile radomes (nose cones)	Defensive tactical missile systems such as the PAC-3 (Patriot Advanced Capability) and the Arrow Missile are designed to fly at extremely high velocities, survive tight turning radii and operate in severe weather conditions. These operating conditions preclude the use of conventional polymer materials for radomes.	We have developed advanced technical ceramic radomes made of fused silica ceramics which meet certain specifications of these tactical defensive missile systems, and have developed a modified silicon nitride radome for more demanding requirements. We have also established a precision diamond grinding capability to finish these radomes.

Market Opportunity	Demands of the Market	Our Solution
Industrial		
Advanced ceramic structural parts	Applications such as high performance pump seals, blast nozzles, chemical processing, and pulp and paper manufacturing, require components with corrosion and wear resistant properties, mechanical strength, hardness, favorable friction properties and the ability to withstand extreme temperature fluctuations.	We have developed products for each of these applications which have excellent wear resistant properties, lightness, hardness and the ability to withstand extremely high temperatures. We manufacture these products using primarily our EKasic® silicon carbide, silicon nitride and boron carbide ceramic.
Boron compounds and metallurgy	Increasing productivity requirements in primary industries are met with boron nitride powders, which are used as high temperature lubricants and release agents. As filler material in polymers and silicones, boron nitride is used for heat conducting and insulating films in the electronic industry. Aluminum and steel foundries increasingly require consumables with longer lifetimes to improve their overall efficiencies.	In the aluminum extrusion industry, boron nitride powder, spray or suspension is used as a release agent to keep the hot metal away from the extrusion die. In furnace and high temperature applications it is used as insulation sleeve or support for graphite heaters. Boron nitride's largely inert behavior towards molten metals makes it an ideal material for applications in direct contact with such materials. We supply break rings for horizontal continuous casting and side-dams for thin strip casting. We also supply high density and high purity silicon nitride products for aluminum-foundries worldwide.
Evaporation boats	Packaging materials used for snack and other food products are often lined with an aluminum coating to preserve shelf life. The coating, or metallization, process requires a tool, called an evaporation boat, which can withstand the high temperature and corrosiveness of melted aluminum.	We have developed evaporation boats, typically made using boron nitride/titanium diboride, that can withstand direct contact with highly corrosive liquids, such as melted aluminum. These evaporation boats are used in the metallization of various surfaces, including paper, plastic and glass.

Market Opportunity	Demands of the Market	Our Solution
Industrial equipment requiring critical protection against severe wear or corrosion	Failure of industrial equipment is often caused by premature wearing out of surfaces due to abrasive action. An example is paper making equipment where the pulp slurry runs at 5,000 feet per minute.	Sintered reaction bonded silicon nitride (SRBSN) industrial wear parts are designed to replace hard metal or oxide ceramic wear surfaces, resulting in greater productivity, quality and longer uptime. Our side dams are used in the refractory industry for the production of steel.
Photovoltaic (solar cell) manufacturing requiring crucibles for melting silicon	In order to produce cost effective solar cell components, it is necessary to melt silicon in a crucible or vessel that will be able to contain the molten silicon yet not allow unwanted chemicals to contaminate the melt.	We have developed a high purity fused silica ceramic crucible (receptacle) which is being used by several photovoltaic cell manufacturers in their silicon melting operation in order to produce polycrystalline silicon. We also manufacture the fused silica powders that are a key material for the production of our ceramic crucibles.
Radioactive waste management and nuclear chemistry products	Increasing stockpiles of radioactive nuclear waste require materials that can be used to safely transport and store items such as spent nuclear fuel rods. New and existing nuclear power plants also require materials capable of containing neutron radiation during day-to-day operations.	The boron atom in boron carbide powder is able to capture neutrons, thus reducing the radioactive risk associated with transportation and storage of nuclear waste. Our Boral® product line, which consists of a hot-rolled aluminum sheet containing a core of uniformly distributed boron carbide and aluminum particles that is enclosed within layers of pure aluminum, forms a solid and effective barrier for the storage of nuclear waste. We also manufacture the boron isotope ¹⁰ B in its pure form. This isotope is a strong neutron absorber and is used for both nuclear waste containment and nuclear power plant neutron radiation critical control. We also produce complementary chemical isotopes used in the normal operation and control of nuclear power plants.

Market Opportunity	Demands of the Market	Our Solution
Semiconductor manufacturing requiring ^{11}B isotopes	Silicon based semiconductor devices require 'p' dopants to move the electrons through the electronic materials.	We produce the boron isotope ^{11}B which is used in the semiconductor manufacturing processes as an additive to semiconductor grade silicon as a "doping" agent and where ultra high purity boron is required.
Materials for precision investment casting	The market is demanding lower cost, thinner molds and faster mold build times.	We have developed fused silica refractory blends that enable the production of highly efficient, single-use mold systems for precision investment casting.
Automotive/Diesel		
Heavy-duty diesel truck engines	In order to achieve diesel engine life of 500,000 miles or more without major maintenance, and to meet current environmental requirements, it may be necessary to replace metal engine components with longer lasting, lighter weight, lower friction ceramic parts at acceptable unit costs.	Our SRBSN ceramic cam rollers replace conventional steel cam rollers in order to allow diesel engines to run at higher internal pressures and thus meet environmental and other requirements.
Wear-resistant functional and frictional coatings	Engines generate extreme vibration during operation that can cause components joined by nuts and bolts to loosen. Traditionally, locknut washers have been used for this application.	Our wear-resistant functional and frictional coatings utilizing entrapped hard particles, primarily diamonds, are applied to shims in lieu of using locknut washers. These coatings increase the static friction coefficient and minimize the effects of vibration and allow more economic and efficient designs of engines, particularly in the auto industry.
Commercial		
Orthodontic brackets	Traditional stainless steel orthodontic brackets are often considered unsightly. Substitute clear plastic materials can be weak and may stain. Some orthodontic patients prefer aesthetically pleasing brackets which can be affixed to each tooth to support the arch wire.	Our translucent ceramic orthodontic brackets are inert, reveal the color of the patient's teeth, and allow the orthodontist to correct the patient's bite. Our marketing partner, 3M Unitek, sells this translucent ceramic bracket under the brand name Clarity™.

Market Opportunity	Demands of the Market	Our Solution
BORONEIGE® boron nitride powder	The cosmetic industry utilizes very fine, white, silky, smooth powders as a base for a wide range of products including lipstick, eye shadow, facial creams, rouge and other related products. There is an increasing demand for these base materials which can make up to forty percent of the end product. Generally, the requirements include white color, controlled chemistry and surface area.	Boron nitride, which is made by our ESK Ceramics subsidiary, is a well controlled micro structure white powder. The use of our unique boron nitride called BORONEIGE® is anticipated to grow as the availability of the base powders and the use of various cosmetic products increase.

Our Competitive Strengths

We believe that several aspects of our company provide us a competitive advantage in the markets we serve, including the following:

Broad Technical Expertise in Ceramic Material Science. Since the founding of our company in 1967, our core business has been researching, developing, designing, manufacturing and marketing advanced technical ceramic products. Specifically, our expertise is in a class of ceramics known as non-oxide structural ceramics. Many of our staff are technically trained, including 121 employees with degrees in ceramic engineering or related sciences, of which 24 have Ph.D. degrees. We have continuously sought to develop and manufacture innovative ceramic products not only for the markets that we currently serve but to identify and apply our experience and capabilities to emerging markets and applications. For example, our expertise allows us to develop ceramic armor products expeditiously and manufacture them on a significant scale.

Proprietary Equipment and Manufacturing Processes. The specialized equipment required to manufacture ceramic powders and advanced technical ceramics must often be custom designed and is not readily available. Over the past several decades, we have designed and constructed a substantial array of highly specialized and customized equipment and manufacturing processes, including our hot press lines and furnaces. We believe our proprietary equipment and manufacturing processes allow us to meet the high volume demands of our customers in the markets that we serve.

Vertically Integrated Body Armor Manufacturer. We are a vertically integrated manufacturer of lightweight ceramic body armor. Our ESK Ceramics subsidiary manufactures boron carbide powder — the key raw material used in the production of our body armor. ESK Ceramics has been a supplier of boron carbide powder to us for over 30 years. We form the boron carbide powder into ceramic armor plates using our own furnaces and hot presses. We then apply backing materials purchased from third parties to the plates to complete a ceramic body armor system ready to ship to our customers. Owning a source of our principal raw material, together with the recent expansion of our manufacturing capacity at our Lexington, Kentucky plant, should allow us to fulfill current and anticipated demand for our ceramic body armor, while enabling us to manage our costs, product yields and high quality standards.

Strong Position in Multiple Markets. We maintain a strong position in many of the markets that we serve. We believe that we are the leading supplier of lightweight ceramic armor products to the U.S. government based on the history of orders that the U.S. government has issued. We further believe that we supply a significant portion of products in many of the markets we serve including: boron carbide powders; translucent ceramic orthodontic brackets; ceramic missile radomes, commonly known as nose cones, for the PAC-3 and Arrow missile programs; sintered reaction bonded silicon nitride, which we call SRBSN, for industrial and automotive applications; evaporation boats used to apply the metallic coating to packaging materials; and wear resistant functional and frictional coatings for the automotive industry. We believe that our leadership position

in ceramic body armor and in many of the other markets that we serve provides us with a key advantage in securing new and continuing business.

Key Customer Relationships. We have longstanding relationships with many of our significant customers in the defense, industrial, automotive/diesel and commercial markets that we serve, which have enhanced our ability to obtain business over time. For example, for more than 20 years we have sold our advanced technical ceramic products to various agencies of the U.S. government. Since 2003, we have derived the majority of our revenues from the Army, Marines, Air Force and other branches of the U.S. military. We possess significant knowledge of the applicable purchasing requirements and product specifications within each of the branches of the U.S. military that we serve, and we believe that we have established an excellent reputation with key individuals within each branch.

Experienced Management Team and Entrepreneurial Culture. Our success is attributable in large part to the extensive knowledge and experience of our management team and key personnel. Our executive management team has substantial experience in advanced technical ceramic materials science and our Chief Executive Officer, our President of North American Operations and our Vice President of Operations each has more than 25 years of experience in the ceramics industry. Our management team has demonstrated its ability to identify, execute and integrate strategic acquisitions into our business through our acquisitions of ESK Ceramics in August 2004, Quest Technology in May 2004, a boron carbide/aluminum cladding product line known as Boral® in June 2006, and Minco, Inc. and EaglePicher Boron, LLC in 2007. Moreover, we believe that the entrepreneurial culture that has been fostered at Ceradyne since 1967 enhances our ability to develop innovative products for the markets that we serve.

Our Business Strategy

Our goal is to create value for our stockholders by profitably developing, manufacturing and selling advanced technical ceramic components to customers in existing and new markets where there is a need for new materials that will increase the efficiency, productivity and life of our customers' end products. Key elements of our strategy for achieving this goal include:

Capitalizing on Opportunities in the Defense Market. The current geopolitical climate, terrorist threats and heightened international conflicts such as those in Iraq and Afghanistan, have been the primary factors driving demand for our defense products. Our defense marketing and sales efforts emphasize sales of ceramic body armor for military personnel to the U.S. government and, with the authorization of the U.S. government, to foreign allies of the United States. We also intend to expand our lightweight ceramic armor products to address additional body armor applications as well as new defense applications in vehicles, boats and aircraft. In response to a solicitation notice from the U.S. military, we have developed a new generation of body armor that is capable of withstanding higher ballistic threats than current versions with approximately the same product weight. We submitted our quotation for this procurement in February 2008.

Recently, we have applied our armor systems experience and expertise, learned over many years in developing and manufacturing ceramic armor for military helicopters, ground-based vehicles and boats, to develop, together with Ideal Innovations, Inc., a ground-based armored vehicle we call the Bull™. The Bull™ armored vehicle is designed to address the increasing need, particularly in Iraq, for protection from improvised explosive devices, known as IED's, mine blasts and high-threat, explosively formed projectiles, known as EFP's. To address the potentially large demand for these armored military vehicles, we have entered into a teaming agreement with Ideal Innovations and Oshkosh Truck Corporation to further develop, produce and market the Bull™ armored vehicle, which will be built on a combat-proven Oshkosh Truck chassis.

In September 2007, in response to a solicitation notice from the U.S. military regarding Mine Resistant Ambush Protected Vehicles II Enhanced Vehicle Competitive, known as MRAP II, we, together with Ideal Innovations and Oshkosh Truck, submitted a quotation and delivered both a 6-person and a 10-person version of the Bull™ armored vehicle to the U.S. Army Aberdeen Test Center for further service evaluation. In December 2007, the U.S. military awarded a delivery order totaling \$18.1 million to Ideal Innovations, Ceradyne and Oshkosh Truck for several 6-person versions and targets of the Bull™ armored vehicle to be used for further government testing. Whether we receive additional orders for the Bull™ armored vehicle will

depend upon the success of these tests, the U.S. military's need and funding for MRAP II armored vehicles, the results of testing of a competitor's MRAP II armored vehicle, and whether our pricing for the Bull™ armored vehicle is competitive.

Continuing to Increase our Non-Defense Revenue Base. We plan to continue to grow our non-defense customer base, primarily through promoting existing products to new customers and developing new products for new and existing customers. We focus on educating our current and potential customers on the advantages of our advanced technical ceramics compared to alternative solutions, and assisting them in developing advanced technical ceramic components for existing or new products and applications. Our highly trained technical and marketing staff educates our customers through direct sales visits, by preparing technical papers and product literature, and by participating in technical conferences, trade shows and exhibitions. Based on these efforts, we believe there is an opportunity to further expand the use of advanced technical ceramic products. For example, we are working with 3M Unitek on developing the next generation of translucent ceramic orthodontic brackets. We also are working with companies in the aluminum industry on utilizing ceramic materials in their next generation smelting production processes that have the potential to reduce the cost of producing aluminum. We also intend to further increase our customer, product and market base by converting certain advanced technical ceramics, originally developed for defense applications, to industrial and commercial applications. In addition to organically growing our product portfolio and market reach, we plan to continue to identify strategic acquisition opportunities that broaden our product lines within industrial and commercial markets. For example, a key strategic reason for our acquisitions of ESK Ceramics, the Boral® product line, Minco, Inc. and EaglePicher Boron, LLC., as well as the expansion of our operations into Canada and China, were to further increase our non-defense revenue base.

Identifying New Products and Markets. We intend to identify new products and markets to meet evolving customer requirements for high performance materials. Due to the special properties of the advanced technical ceramics we produce, we believe there are numerous applications and markets for such materials. Our research and development efforts have identified several new applications for advanced technical ceramics in both existing markets, such as the defense industry, and new markets, including the energy, metals production and chemical industries. Such new applications include lightweight ceramic armor for military vehicles, boats and aircraft; ceramic components that have the potential to facilitate extraction of oil from oil sands on a cost-effective basis; ceramic materials that have the potential to reduce significantly the cost of producing molten aluminum; chemical micro reactors, heat exchangers and hydraulic trim valves produced with our proprietary technology that have the potential to provide an economical substitute for steel in extreme environments; storage containers made with our boron carbide powder that have the potential to be used for long-term containment of nuclear waste from nuclear power plants; and small complicated ceramic components made using our injection molding technology that have the potential to be used as medical implants. We also expect to continue to benefit from the addition of ESK Ceramics' expertise in ceramic powders and products, which has expanded the scope and scale of our product development efforts.

Investing to Improve our Gross Margins and Manufacturing Efficiencies. We focus on cost containment, productivity enhancements and manufacturing efficiencies as a means to drive earnings growth. We have implemented lean manufacturing initiatives, such as Demand Flow® Technology and 5-S plus Safety in order to reduce inventories, scrap and queue times and to increase productivity. Additionally, we continue to evaluate opportunities to employ automation and dedicated work cells to expand our in-line production efficiency. We also continue to seek ways to reduce our manufacturing costs by evaluating opportunities to relocate or expand manufacturing operations within the United States as well as internationally. For example, in 2004, we began expanding our high energy-utilization manufacturing processes at our new Lexington, Kentucky facility, where the cost of electricity, which comprises a significant portion of our cost of product sales, is substantially lower than in California. We plan to evaluate strategic manufacturing relationships in international markets, including joint ventures or acquisitions, particularly in low cost manufacturing areas such as Mexico and China. We completed the construction in June 2007, of a new approximately 98,000 square foot facility in Tianjin, China for the manufacture of ceramic crucibles which are used for melting silicon in the photovoltaic solar cell manufacturing process. We plan to increase this capacity and will start construction during 2008 of an approximately 200,000 square foot facility in Tianjin, China for the manufacture of ceramic crucibles. We also

plan to develop strategic relationships with other manufacturing companies or key customers whose expertise or financial resources can assist us in accomplishing our objectives.

Market Applications and Products

Our products are sold into four principal markets: defense, industrial, automotive/diesel and commercial. The following is a description of our principal products by market application:

Defense

Lightweight Ceramic Armor. We have developed and currently manufacture lightweight ceramic armor capable of protecting against threats as great as 12.7 millimeter armor piercing machine gun bullets. Compared to traditional steel armor plates, our ceramic armor systems offer weight savings as great as 40%. Using hot pressed Ceralloy® ceramic, our armor plates are laminated with either Spectra Shield®, Dyneema®, Kevlar™, fiberglass, custom hybrid laminates or aluminum and formed into a wide variety of shapes, structures and components. Initially, our manufactured ceramic armor was used principally for military helicopter crew seats and airframe panels. We are now also a major supplier of lightweight ceramic body armor for the U.S. military, and we produce lightweight ceramic armor for military helicopters.

Boron Carbide Powders. We manufacture boron carbide powder, which is the principal raw material used in the production of our lightweight ceramic body armor. Our ESK Ceramics subsidiary is one of the world's leading manufacturers of this material. ESK Ceramics has been a supplier of boron carbide powder to us for over 30 years and also supplies our ceramic body armor competitors.

Missile Radomes (Nose Cones). We manufacture conical shaped, precision machined ceramic radomes which are designed for the front end of defensive missiles. These radomes are used where missile velocities are high and operating environments are severe, and the thermal shock and erosion resistance, high strength and microwave transparency properties of advanced technical ceramics are required. Our ceramic radomes are used on the PAC-3 (Patriot Advanced Capability) and the Arrow Missile.

Industrial

Fluid Handling/Wear Parts. We supply products made primarily of our EKasic® silicon carbide, silicon nitride and boron carbide, which have excellent wear resistant properties, lightness, hardness, and can withstand extremely high temperatures. Products furnished are used in high performance pump seals, bearings for fluid handling, blast nozzles and chemical processing.

Boron Compounds and Metallurgy. Boron nitride powders have excellent release properties and are highly resistant to wear and corrosion. These powders are used in the forming and bending of glass, as an additive in refractory materials, and as a lubricant for aluminum extrusion. Our silicon nitride products have excellent thermal shock resistance and temperature stability up to 1,200° Centigrade. These products are used for transportation of liquid aluminum, for use in low and high pressure casting and in liquid aluminum processes.

Evaporation Boats. Our evaporation boats are used in the metallization of various surfaces such as plastic, paper or glass. Metallization is a process based on the deposition of a metallic vapor under vacuum to coat a substrate surface with a thin layer of aluminum, zinc, copper or silver. The preferred metal for the metallizing process is aluminum. Evaporation boats have direct contact with highly corrosive liquid metal alloys and are made out of a boron nitride/titanium diboride composite material. These products provide packaging manufacturers the ability to apply vaporized aluminum to packaging material that as a finished product helps to preserve and maintain the shelf life of food products.

Industrial Wear Components. Our industrial wear components are made primarily of our Ceralloy® 147 sintered reaction bonded silicon nitride (SRBSN). These SRBSN ceramic components are generally incorporated in high wear areas of industrial machinery where severe abrasive conditions would otherwise wear out vital components. Our wear resistant parts are used to replace parts made of materials such as tungsten carbide

or ceramics such as aluminum oxide. Applications include paper making equipment, abrasive blasting nozzles, metal cutting tool inserts as well as custom products.

Radioactive Waste Management. Boron carbide powder has a high cross-section for capturing neutrons, making it an ideal material for the management of radioactive nuclear waste from nuclear power plants. Typical applications include use in neutron absorbing parts, such as control rods in nuclear power plants, and nuclear shielding in the storage and transportation of nuclear waste materials. Our Boral® product line, which consists of a rolled aluminum sheet containing a core of uniformly distributed boron carbide and aluminum particles that is enclosed within layers of pure aluminum, forms a solid and effective barrier for the storage of nuclear waste. We also produce the boron isotope ^{10}B . This isotope is a strong neutron absorber and is used for both nuclear waste containment and nuclear power plant neutron radiation critical control.

Ceramic-Impregnated Dispenser Cathodes. We manufacture ceramic-impregnated dispenser cathodes for microwave tubes used in radar, satellite communications, electronic countermeasures and other applications. Dispenser cathodes, when heated, provide a stream of electrons which are magnetically focused into an electron beam. Microwave dispenser cathodes are primarily composed of a porous tungsten matrix impregnated with ceramic oxide compounds. The use of ceramic-impregnated cathodes reduces the amount of energy necessary to create a high level of electron emissions. Our ceramic-impregnated cathodes are also used in ion lasers and cathode ray tubes.

Tempered Glass Furnace Components and Metallurgical and Industrial Tooling. Fused silica ceramic does not, to any material extent, expand when heated or contract when cooled. This material is therefore used for industrial tooling components and molds where complicated shapes and dimensions are maintained over a wide range of temperatures. Such applications include forming and shaping titanium metal used in aircraft manufacture. Other applications take advantage of fused silica's excellent thermal shock resistance and inertness when in contact with glass. We produce fused silica ceramic rollers up to 14 feet in length used in glass tempering furnaces.

Fused Silica Ceramic Crucibles. We manufacture fused silica ceramic crucibles, or receptacles, which are used in the fabrication of polycrystal silicon for photovoltaic cells that convert sunlight into electricity. These crucibles are designed to withstand high temperatures and thermal shock when in contact with molten silicon, without contaminating the melt.

Precision Ceramics. We manufacture a variety of hot pressed Ceralloy® ceramic compositions that are precision diamond ground to exacting tolerances, primarily for microwave tube applications. The interior cavities of microwave tubes often require microwave absorbing ceramic components capable of operating at elevated temperatures and in high vacuums.

Samarium Cobalt Permanent Magnets. We manufacture and market our samarium cobalt magnets as components primarily for microwave tube applications. Electron beams in microwave tubes generated by the dispenser cathodes described above can be controlled by the magnetic force provided by these powerful permanent magnets. The magnets are generally small sub-components of microwave traveling wave tubes.

Boron Isotopes for the Nuclear Industry. We enrich and manufacture the boron isotope ^{10}B which is a material that is used by the nuclear power industry. The ^{10}B isotope is critical to the safe operations of the U.S. nuclear power industry, waste storage, and the stability and safe-keeping of nuclear weapons.

Boron Isotopes for Semiconductors. We produce the boron isotope ^{11}B , which is used in the semiconductor manufacturing process as an additive to semiconductor grade silicon as a "doping" agent and where ultra high purity boron is required.

Precision Investment Casting Products. We manufacture fused silica grains and powder products that are used in precision investment casting, a highly sophisticated manufacturing process used to make a wide range of precision dimensioned castings for a broad base of different industries. The process requires low expansion materials for one time use in the casting process. Our products include proprietary blends that reduce our customers' cast and cycle time.

Automotive/Diesel

Wear-Resistant Functional and Frictional Coatings. We manufacture our Ekagrip® Foils for wear-resistant functional and frictional coatings utilizing entrapped hard particles, primarily diamonds. This product line increases the static friction coefficient, minimizes the effects of vibration and allows more economic and efficient designs of engines, particularly in the auto industry.

Diesel Engine Components. We have been manufacturing ceramic cam rollers for heavy-duty diesel engines since 1999, and now have production contracts to supply cam rollers to several major engine companies. However, two of our largest customers recently have developed new diesel truck engines that are designed to use steel cam rollers rather than our more expensive ceramic cam rollers. We also supply a fuel systems manufacturer with components for a diesel fuel pump. In addition, we are engaged in development projects with a number of other diesel engine and fuel pump systems manufacturers worldwide for various ceramic components.

Commercial

Ceramic Orthodontic Brackets. In orthodontics, to correct a patient's tooth alignment, a small stainless steel bracket is attached to each tooth. These brackets provide a guide to the archwire, which is the wire that sets into each bracket. The cosmetic appearance of this metal is often considered unattractive. Together with 3M Unitek, we have developed a patented (jointly owned by Ceradyne and 3M Unitek) ceramic bracket which 3M Unitek markets to orthodontists under the brand name Clarity™. The translucency of this ceramic bracket, together with the classic ceramic properties of hardness, chemical inertness and imperviousness, result in a cosmetic substitute for traditional stainless steel brackets. These brackets reveal the natural color of the patient's teeth while performing the structural functions of traditional stainless steel brackets.

BORONEIGE® Boron Nitride Powder. We manufacture and market to the cosmetic industry a very fine, white, silky, smooth powder called BORONEIGE®, which is used as a base for a wide range of products including lipstick, eye shadow, facial creams, rouge and other related products.

Operating Divisions and Facilities

We serve our markets through six segments with manufacturing facilities in several locations across the United States, one in Canada, two locations in Europe — Germany and France and one in China. The following table includes a summary of our facilities and products comprising our six operating segments.

Operating Segment and Facility Location	Products
<i>Ceradyne Advanced Ceramic Operations</i>	<i>Defense Applications:</i> <ul style="list-style-type: none">• Lightweight ceramic armor
Costa Mesa and Irvine, California ⁽¹⁾ Approximately 240,000 square feet	<i>Industrial Applications:</i> <ul style="list-style-type: none">• Ceralloy® 147 SRBSN wear parts• Precision ceramics
Lexington, Kentucky ⁽²⁾ Approximately 115,000 square feet	<i>Automotive/Diesel Applications:</i> <ul style="list-style-type: none">• Ceralloy® 147 SRBSN automotive/diesel engine parts
Wixom, Michigan ⁽³⁾ Approximately 29,000 square feet	<i>Commercial Applications:</i> <ul style="list-style-type: none">• Ceramic orthodontic brackets• Components for medical devices

Operating Segment and Facility Location	Products
<i>ESK Ceramics</i>	<i>Defense Applications:</i>
Kempton, Germany ⁽⁴⁾ Approximately 544,000 square feet	<ul style="list-style-type: none"> • Boron carbide powders for body armor
Bazet, France ⁽⁵⁾ Approximately 88,000 square feet	<i>Industrial Applications:</i>
	<ul style="list-style-type: none"> • Ceramic powders: boron carbide, boron nitride, titanium diboride, calcium hexaboride and zirconium diboride • Silicon carbide parts • Evaporation boats for the packaging industry • High performance pump seals
	<i>Automotive/Diesel Applications:</i>
	<ul style="list-style-type: none"> • EKagrip® functional and frictional coatings
	<i>Commercial Applications:</i>
	<ul style="list-style-type: none"> • BORONEIGE® boron nitride powder for cosmetics
<i>Ceradyne Semicon Associates</i>	<i>Industrial Applications:</i>
Lexington, Kentucky ⁽⁶⁾ Approximately 35,000 square feet	<ul style="list-style-type: none"> • Ceramic-impregnated dispenser cathodes for microwave tubes, lasers and cathode ray tubes • Samarium cobalt magnets
<i>Ceradyne Thermo Materials</i>	<i>Defense Applications:</i>
Scottdale and Clarkston, Georgia ⁽⁷⁾ Approximately 132,000 square feet	<ul style="list-style-type: none"> • Missile radomes (nose cones) • High purity fused silica used to manufacture missile radomes (nose cones)
Tianjin, China ⁽⁸⁾ Approximately 98,000 square feet	<i>Industrial Applications:</i>
Midway, Tennessee ⁽⁹⁾ Approximately 105,000 square feet	<ul style="list-style-type: none"> • Glass tempering rolls • Metallurgical tooling • Castable and other fused silica products • Crucibles for photovoltaic solar cell applications • Turbine components used in aerospace applications
<i>Ceradyne Canada</i>	<i>Industrial Applications:</i>
Chicoutimi, Canada ⁽¹⁰⁾ Approximately 86,000 square feet	<ul style="list-style-type: none"> • Boral® structural neutron absorbing materials • Metal matrix composite structures
<i>Ceradyne Boron Products</i>	<i>Industrial Applications:</i>
Quapaw, Oklahoma ⁽¹¹⁾ Approximately 128,000 square feet	<i>Nuclear Applications:</i>
	<ul style="list-style-type: none"> • Nuclear chemistry products for use in pressurized water reactors and boiling water reactors • Radioactive containment for use in spent fuel transport and storage • Burnable poisons for coating of uranium fuel pellets
	<i>Semiconductor Applications:</i>
	<ul style="list-style-type: none"> • P-dopants for semiconductor silicon manufacturing • P-dopants for ion implanting of silicon wafers

- (1) We have leases on our facilities in Costa Mesa, California, aggregating approximately 99,000 square feet, all of which expire in October 2010. We own our 40,000 square foot facility in Irvine, California. We also lease in Irvine, California a 24,000 square foot facility that expires in April 2009 and a 76,000 square foot facility that expires in April 2011.
- (2) We own our facility in Lexington, Kentucky.
- (3) We have a lease on our Wixom, Michigan facility which expires in April 2010.
- (4) We own our facility in Kempten, Germany, as well as the 22-acre property on which our facility is located.
- (5) We own our facility in Bazet, France, as well as the four-acre property on which our facility is located.
- (6) We own our facility in Lexington, Kentucky, as well as the five-acre property on which our facility is located.
- (7) We own an 85,000 square foot facility in Scottdale, Georgia, as well as the five-acre property on which our facility is located. We have a lease on our 47,000 square foot facility in Clarkson, Georgia which expires in May 2009.
- (8) We own our facility in Tianjin, China, as well as the four-acre property on which our facility is located.
- (9) We own our facility in Midway, Tennessee as well as the 40-acre property on which our facility is located.
- (10) We own our facility in Chicoutimi, Quebec, Canada, as well as the seven-acre property on which our facility is located.
- (11) We own our facility in Quapaw, Oklahoma as well as the 155-acre property on which our facility is located.

Sales, Marketing and Customers

Each of our six operating segments maintains a separate sales and marketing force promoting its individual products. As of December 31, 2007 we had 97 employees directly involved in sales and marketing, including 58 sales and marketing personnel located outside the United States. We also have agreements with manufacturers' representatives in foreign countries who are compensated as a percent of sales in their territory. Sales to customers located outside the United States represented approximately 18.0% of our net sales in 2007, 15.9% in 2006 and 26.1% in 2005.

We continue to explore various domestic and international relationships to increase our sales and market penetration. We seek long-term relationships such as multi-year agreements or exclusive relationships with our customers to achieve a more consistent and predictable flow of orders and shipments.

We sell products and components to the U.S. government and government agencies, as well as to government contractors, original equipment manufacturers and to end users. The U.S. government and government agencies collectively represented 71.6% of our net sales in 2007, 73.4% in 2006 and 65.8% in 2005.

We sell our translucent ceramic orthodontic brackets, commonly known as braces, only to 3M Unitek. Sales to 3M Unitek represented approximately 1.7% of our net sales in 2007, 1.6% in 2006 and 2.7% in 2005. In December 2005, we entered into a new supply agreement with 3M Unitek that expires in December 2010, and which may be extended by 3M Unitek at its option for an additional two years. This new agreement replaces our original, March 1986 joint development and supply agreement with 3M Unitek, that would have expired in September 2007. 3M Unitek is a major manufacturer of stainless steel orthodontic brackets and, early in our relationship, shared with us the functional specifications and properties which ceramic brackets would be required to satisfy. With this information and our experience with translucent ceramics in defense applications, we developed, and in 1987 began manufacturing, translucent ceramic brackets. Under the original supply agreement, 3M Unitek was required to purchase ceramic orthodontic brackets exclusively from Ceradyne until September 2007. Under the terms of the new agreement, 3M Unitek will continue to purchase 100% of their Clarity and Transcend brand ceramic orthodontic product lines exclusively from us for as long

as 3M Unitek continues to sell such products. The new agreement further stipulates that Unitek must purchase from Ceradyne at least 50% of the ceramic orthodontic brackets 3M Unitek requires for next generation designs, which it introduced in 2007.

Manufacturing Processes

We employ a number of advanced technical ceramic manufacturing processes that enable us to deliver high quality products designed to meet specific customer requirements. The processes used to manufacture our principal products are described below.

Hot Pressing. Our hot pressing process is generally used to fabricate ceramic shapes for lightweight ceramic armor. We have designed and constructed induction heated furnaces capable of operating at temperatures exceeding 4,000°F in inert atmospheres at pressures up to 5,000 pounds per square inch. With this equipment, we can fabricate parts more than 26 inches in diameter, which is considered large for advanced technical ceramics. Using multiple cavity dies and special tooling, we can produce a number of parts in one furnace during a single heating and pressing cycle.

Our raw materials are fine powders procured from our ESK Ceramics subsidiary, as well as from several outside suppliers. After we process them, the powders are either loaded directly into the hot pressing molds or are shaped into pre-forms prior to loading into the hot pressing molds. The powders are placed in specially prepared graphite tooling, most of which we machine to shape. Heat and pressure are gradually applied to the desired level, carefully maintained and finally reduced. The furnace is then removed from the press and allowed to cool, permitting the press to be used with another furnace. For most products, this cycle takes approximately 20 hours. The resultant ceramic product generally has mechanical, chemical and electrical properties of a quality approaching theoretical limits. Almost all products, other than armor, are then finished by diamond grinding to meet precise dimensional specifications.

Ceramic Powders (Boron Carbide TETRABOR®, Boron Nitride, Titanium Diboride, Calcium Hexaboride, Zirconium Diboride). We purchase raw materials like carbon, boric acid and oxides from outside vendors. These raw materials are converted into the final formulation in large high temperature processes using an arc furnace. After the resultant material is cooled, it is broken down into fine particulates that are then purified through a chemical treatment. The next process is the production and classification of various grain sizes. The manufacturing processes result in a very high and consistent quality powder. The resulting finished ceramic powder products are used in a wide range of applications, such as ceramics and powders for abrasives, armor, neutron absorption and refractories.

Sintering and Reaction Bonding of Silicon Nitride (SRBSN). The sintering of reaction bonded silicon nitride results in our Ceralloy® 147 SRBSN, which is used in industrial and automotive/diesel applications. This SRBSN process begins with relatively inexpensive high purity elemental silicon (Si) powders, which contrasts sharply with some other competitors' manufacturing techniques which start with relatively more expensive silicon nitride (Si₃N₄) powders.

After additives are incorporated by milling and spray drying, the silicon powders are formed into shapes through conventional ceramic processing such as dry pressing. These shapes are then fired in a nitrogen atmosphere which converts the silicon part to a silicon nitride part. At this step (reaction bonding), the silicon nitride is pressure sintered in an inert atmosphere increasing the strength of the component threefold. As a result of SRBSN processing, the ceramic crystals grow in an intertwining "needle-like" fashion which we have named NeedleLok™. The NeedleLok™ structure results in a strong, tough, high fracture energy part. This process can be used to produce extremely high production volumes of parts due to the use of conventional pressing processes.

Manufacture of Translucent Ceramics (Transtar®). We produce translucent aluminum oxide (Transtar®) components primarily for use as orthodontic ceramic brackets. We purchase the high purity powders from outside vendors and process them using dedicated conventional ceramic mechanical dry presses. The formed blanks are then fired in a segregated furnace in a hydrogen atmosphere at over 3,000°F until the ceramics enter into a mechanically strong, translucent condition. These fired translucent brackets then have certain

critical features diamond ground into them. The next step is a proprietary treatment of the bonding side in order to permit a sound mechanical seal when bound to the patient's teeth. In the final step we furnace braze a stainless steel channel into each archwire slot which has been previously diamond ground into the bracket.

Functional Coatings. Our functional coatings are formed by the deposition of hard particles, primarily diamonds, in a nickel layer on steel, aluminum or titanium. We purchase the hard particles — sized between nanometers and 60µm — from outside vendors and customize these raw materials through chemical treatment. Before being coated, the metal parts are chemically cleaned and deburred. The final product is manufactured by an electroless nickel coating process with simultaneous embedding of hard particle grains. The final step is the hardening of the nickel surface by a heat treatment process up to 660°F.

Evaporation Boats (LaserMet®, DiMet®, TriMet®, FlashMet®). Evaporation boats are ceramic sintered parts consisting of titanium diboride/boron nitride and other nitride compositions for our TriMet® product. These components, in the form of ceramic powders, are milled and conditioned. The key forming process is hot pressing, which results in solid sintered billets. From these sintered billets, the evaporation boats are machined with proprietary processes to various types and shapes.

Sintered Parts. For the production of sintered parts, we either buy raw materials like silicon carbide from outside vendors or use our own ceramic powders. With our specific developed processes, we condition the ceramic powders by incorporating additives, milling, and spray drying into ready-to-press powders. We then utilize the processing steps of forming, green machining, sintering and machining as the materials are transformed into various shapes. We utilize a broad range of technological processes and equipment to accomplish this. Examples of these processes include cold isostatic pressing, axial dry pressing, injection molding, extrusion molding, pressure sintering, hot pressing, hot isostatic pressing and pressureless sintering.

Diamond Grinding. Many of our advanced technical ceramic products must be finished by diamond grinding because of their extreme hardness. Our finished components typically are machined to tolerances of $\pm .001$ inch and occasionally are machined to tolerances up to $\pm .0001$ inch. To a limited extent, we also perform diamond grinding services for customers independently of our other manufacturing processes to specifications provided by the customer. Our diamond grinding facilities can perform surface grinding, diameter grinding, ultrasonic diamond grinding, diamond lapping, diamond slicing and honing. The equipment includes manual, automatic and computer numerically controlled, or CNC, grinders. We have specially adapted the CNC grinders for precision grinding of ceramic contours to exacting tolerances.

Sintering of Fused Silica Ceramics. Sintering of fused silica ceramics is the process we use to fabricate fused silica ceramic shapes for applications in glass tempering furnaces, metallurgical tooling, missile radomes (nose cones) and other industrial uses. To fabricate fused silica ceramic shapes, fused silica powders are made into unfired shapes through slip casting or other ceramic forming processes. These unfired "green" shapes are fired at temperatures up to 2,500°F. The final shapes are often marketed in the "as fired" condition or, in some cases, precision diamond ground to achieve specific dimensional tolerances or surface finishes required by certain customers.

Injection Molding. Certain markets, like medical device components, require ceramic shapes that are small, highly configured and held to tight dimensional tolerances. Many of these can only be produced by the injection molding process. At the present time these powders tend to be oxide ceramics, primarily zirconia, alumina and/or blends thereof that we mix in house. The ceramic powder is then blended with organic ingredients that constitute a proprietary binder system. The resultant feedstock allows us to process the material through a standard injection-molding machine into a precision mold designed by us.

Boron Carbide and Aluminum Metal Matrix Composites. For the production metal matrix composite materials, we purchase billets consisting of a core of pure aluminum with boron carbide powder distributed uniformly throughout the billet, then roll or extrude them into sheets or shapes. For the production of Boral®, we acquire an extruded aluminum material into which we place a proprietary mixture of aluminum and boron carbide powder. We roll this material into thin sheets of shield material, which can then be cut into numerous sizes.

Boron Isotopes. We separate natural boron material into the two isotopes of boron, ^{10}B and ^{11}B . We then convert these isotopes into specific molecules requested by our customers, such as boric acid, zirconium diboride, boron trifluoride or Boron metal. We employ a broad range of technological equipment and processes to produce the isotopically enriched molecule of choice.

High Purity Fused Silica. To produce our fused silica powder products, we melt washed quartz sand into large ingots using an electric arc melting process and then crush the ingots into powder products using various crushing, grinding, milling, and size separation equipment. The melting process transforms the quartz raw material into fused silica glass. The phase transformation that occurs during the melting process results in a finished product whose thermal expansion is much less than that of the quartz sand raw material.

Raw Materials

The starting raw materials for our manufacturing operations are generally fine, synthetic powders available from several domestic and foreign sources, including our subsidiary, ESK Ceramics. ESK Ceramics supplied 562 tons of boron carbide powder to us in 2005, 1,061 tons in 2006 and 1,078 tons in 2007. We have owned ESK Ceramics since August 23, 2004. Our new Minco, Inc. subsidiary, which we acquired on July 10, 2007, supplies us with high purity fused silica powders. Other raw materials, such as the backing material for ceramic armor, graphite and metal components, are procured from several commercial sources.

Quality Control.

We make our products to a number of exacting specifications. In order to meet both internal quality criteria and customer requirements, we implement a number of quality assurance and in-process statistical process control programs. We implement these quality programs separately at each of our manufacturing locations. Our Advanced Ceramic Operations, ESK Ceramics and Thermo Materials facilities have received ISO 9001 Certification. Ceradyne Semicon Associates is ISO 9000 compliant. Our recently acquired Minco, Inc. subsidiary is ISO 9001:2000 certified.

Engineering and Research

Our engineering and research efforts consist of application engineering in response to customer requirements, in addition to new materials and product development. Our efforts create new products, modify existing products to fit specific customer needs and result in developing enhanced ceramic processes.

We allocate costs associated with application engineering and research between cost of product sales and research and development expense. Application engineering efforts devoted to specific customer orders generally are recognized as cost of product sales, while the balance of engineering and research costs is included in research and development and expensed as incurred. Our research and development expenses were approximately \$17.6 million in 2007, \$9.9 million in 2006, and \$7.8 million in 2005.

Competition

Our products compete with advanced technical ceramic products and powders from other companies, as well as with high strength steel alloys and plastic products. When competing with other advanced technical ceramic products and powders, we believe the principal competitive factors are manufacturing capacity and the ability to deliver products, price, product performance, material specifications, application engineering capabilities, customer support and reputation. Some of our competitors include ArmorWorks, Ceramtec, the Armor Holdings and Cercom subsidiaries of BAE Systems, CoorsTek, Denka, Momentive Performance Materials, Hitachi, HC Starck, Kyocera's Industrial Ceramics Group, Morgan, Saint Gobain, Sintec, Spectra-Mat, UK Abrasives, Vesuvius, C-E Minerals, NHTC, Holtec, Nukem and General Electric. Many of our current or potential competitors have greater financial, marketing and technical resources than we do. We cannot guarantee that we will be able to compete successfully against our current or future competitors. If we fail to compete successfully, there could be material adverse effects on our business, financial condition and results of operations. In many applications we also compete with manufacturers of non-ceramic materials. When competing with high strength steel alloys and plastic products, we may not be able to compete

effectively when price is a primary consideration, because our products are typically more expensive as a result of higher manufacturing costs associated with the production of advanced technical ceramics.

Backlog

We record an item as backlog when we receive a contract, purchase order or other notification indicating the number of units to be purchased, the purchase price, specifications, delivery requirements and other customary terms and conditions. Our backlog was approximately \$344.3 million as of December 31, 2006 and approximately \$238.9 million as of December 31, 2007. We expect that substantially all of our backlog as of December 31, 2007 will be shipped during 2008.

Patents, Licenses and Trademarks

We rely primarily on trade secrecy to protect compositions and processes that we believe are proprietary. In certain cases, the disclosure of information concerning such compositions or processes in issuing a patent could be competitively disadvantageous. However, our management believes that patents are important for technologies where trade secrecy alone is not a reliable source of protection. Accordingly, we have applied for, or have been granted, several U.S. patents relating to compositions, products or processes that our management believes are proprietary, including lightweight ceramic armor.

We have been issued two U.S. patents relating to translucent ceramics for orthodontic brackets. The first of these two patents expired in September 2007, and the second patent expires in October 2013. We co-invented and co-own these patents with 3M Unitek. Together with 3M Unitek, we have granted licenses to companies whose ceramic orthodontic brackets infringe our joint patents. These companies pay both of us royalties based on sales of their orthodontic ceramic brackets for the remaining life of the patents.

In addition to the above, we have been issued 28 U.S. patents and have 15 patents pending and have applied for corresponding foreign patents in various foreign countries. Of the number of patents indicated above, our subsidiary, ESK Ceramics, has been issued 12 U.S. patents, while 6 patents are pending.

The proprietary coarse grained silicon carbide materials, including silicon carbide materials with graphite inclusions, are protected by patents in Europe, the United States, Canada, Japan and the Czech Republic. These patents expire in 2017. Other patents and one patent pending also relate to sintered silicon carbide materials, the earliest expiring in 2010. Another 2 patents for evaporation boats have been issued in Europe, the United States, Canada and Japan. The earliest of these patents expires in 2019. One other patent is on EKagrip® friction enhancing coatings, which expires in 2019, and there is an additional patent pending on EKagrip®. Other patents relate to boron nitride materials and composite ceramic materials.

"Ceralloy®," the name of our technical ceramics, "Ceradyne®" and the Ceradyne logo, comprising the stylized letters "CD®," are our major trademarks registered in the United States and various foreign countries. We also have other trademarks, including "Transtar®," "Semicon®," "Thermo®," "Netshape®," "Defender®," "NeedleLok™," and "Ramtech™". The ESK Ceramics logo, and ESK Ceramics' major product trademarks, including "TETRABOR®," "EKasic®," "DiMet®," "TriMet®," "MYCROSINT®," "EKagrip®," "BOROMID®," "EKamold®," "LaserMet®," "EllipsoMet®" and "EKatherm®" are registered in Germany and many countries worldwide. The ESK Ceramics' product trademarks "BORONEIGE®" and "EKathemis®" are registered in Germany and registration has been applied for in many countries worldwide. The Minco logo, consisting of an ingot design featuring the word "Minco" in the center of the ingot, is registered in the United States.

Employees

As of December 31, 2007 we had 2,511 employees, including 145 employees with undergraduate or graduate degrees in ceramic engineering or related sciences. Of these total employees, 2,023 were in manufacturing, 217 were in engineering and research, 97 were in sales and marketing, and 174 were in general management, finance and administration. We also use temporary labor in some of our production operations. We generally consider our relationship with employees to be excellent. None of our U.S.-based employees are represented by labor unions. The employees of ESK Ceramics have elected a works council, an entity which

represents employees and is entitled to information and co-determination rights under German law. We consider our relationship with the works council to be good.

Availability of SEC Filings

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission. You can read our SEC filings over the Internet at the SEC's website at <http://www.sec.gov>. We also make our SEC filings available free of charge through our Internet website as soon as reasonably practicable after we electronically file them with, or furnish them to, the SEC. Our website address is www.ceradyne.com. The reference to our website address does not constitute incorporation by reference into this report of the information contained at that site.

EXECUTIVE OFFICERS OF CERADYNE

Our executive officers and their ages as of February 25, 2008 are as follows:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Joel P. Moskowitz	68	Chairman of the Board, Chief Executive Officer and President
David P. Reed	53	Vice President, and President of North American Operations and Assistant Corporate Secretary
Jerrold J. Pellizzon	54	Chief Financial Officer and Corporate Secretary
Michael A. Kraft	45	Vice President of Nuclear and Semiconductor Business Units
Thomas Jüngling	44	Vice President, and President of ESK Ceramics
Bruce Lockhart	45	Vice President, and President of Thermo Materials
Jeff Waldal	43	Vice President, and President of Semicon Associates
Kenneth R. Morris	54	Vice President of Operations

Joel P. Moskowitz co-founded our predecessor company in 1967. He served as our President from 1974 until January 1987, and has served as our President since September 1987. In addition, Mr. Moskowitz has served as our Chairman of the Board and Chief Executive Officer since 1983. Mr. Moskowitz currently serves on the Board of Trustees of Alfred University. Mr. Moskowitz obtained a B.S. in Ceramic Engineering from Alfred University in 1961 and an M.B.A. from the University of Southern California in 1967.

David P. Reed joined us in November 1983, and has served as a Vice President since January 1988. In February 2005, Mr. Reed was appointed to the newly created position of President of North American Operations, with responsibility for all the company's Advanced Ceramic Operations in Costa Mesa, Irvine and San Diego, California, as well as the new plant in Lexington, Kentucky; Ceradyne Thermo Materials, in Scottdale, Georgia; and Ceradyne Semicon Associates, in Lexington, Kentucky. Mr. Reed's focus has been and will continue to be on lightweight ceramic armor systems. Prior to joining us, Mr. Reed served as Manager, Process Engineering for the Industrial Ceramic Division of Norton Co. from 1980 to 1983. Mr. Reed obtained a B.S. in Ceramic Engineering from Alfred University in 1976 and an M.S. in Ceramic Engineering from the University of Illinois in 1977.

Jerrold J. Pellizzon joined us in September 2002 and serves as our Chief Financial Officer and Corporate Secretary. Prior to joining us, Mr. Pellizzon was Chief Executive Officer of DrSoy Nutrition, Inc., a developer of soy protein based food products, from 2000 until 2002. From 1994 through 2000, Mr. Pellizzon served as Chief Operating Officer and Chief Financial Officer of Met-Rx Substrate Technologies. From 1984 to 1993, Mr. Pellizzon was Chief Financial Officer for Breton Construction, Inc., and served on their executive committee and board of directors. Prior to 1984, Mr. Pellizzon held executive and management positions at Duke Timber Construction/Tobin Steel Company and was employed as a C.P.A. in public accounting. Mr. Pellizzon obtained his B.S. in Economics from UCLA in 1975.

Michael Kraft joined us in February 2005 and served as Vice President of Sales, Marketing and Business Development until June 2007; when he was appointed Vice President of Nuclear and Semiconductor Business Units. Prior to joining us, Mr. Kraft was Managing Director of BVI Capital Partners, an investment bank that provides restructuring services, from 2003 through 2005, and President and Founder of KAM Solutions, LLC, an engineering and materials testing services firm, in 2003. From 2000 through 2002, Mr. Kraft was President, USA, for Rational AG and from 1993 through 2000, he held various management and marketing positions with Kulicke & Soffa Industries, Inc. Prior to 1993, Mr. Kraft held various management and marketing positions with General Electric Company. He holds degrees with honors from Michigan State University in electrical engineering and an M.B.A. degree from Pennsylvania State University.

Thomas Jüngling joined us in July 2005 as Director of Business Development and Technology Integration and has served in the newly created position of Chief Technology Officer since January 2006. In September 2007, Mr. Jüngling was promoted to President of our ESK Ceramics subsidiary, and he was appointed a Vice President of Ceradyne in December 2007. Prior to joining us, Mr. Jüngling was Business Unit Manager at Inovon GmbH & Co. KG, Germany. From 1996 to 2004, Mr. Jüngling held various positions at Elektroschmelzwerk, Kempten GmbH (ESK Ceramics) and Wacker-Chemie GmbH, Germany. Mr. Jüngling obtained his Diploma in Mechanical Engineering in 1988 and his PhD in Engineering (Material Science) in 1992, both from the University of Karlsruhe, Germany.

Bruce Lockhart joined our Thermo Materials division as its President in September of 2001, and was appointed a Vice President of Ceradyne in February 2003. Prior to joining us, Mr. Lockhart had 16 years of varied experience in the ceramic industry, the majority of which was with Thermal Ceramics Inc., a provider of products for engineered heat management solutions. Mr. Lockhart received a B.S. in Ceramic Engineering from Clemson University in 1985 and a M.B.A. from Clemson University in 1990.

Jeff Waldal joined our Semicon Associates division in 1995 as a quality manager, and was promoted to manufacturing manager in 1997 and to President of Semicon in 1999. Mr. Waldal was elected as a Vice President in February 2003. He is currently responsible for the operations, finances and marketing at Semicon Associates. Mr. Waldal began his career as senior materials technician at United Technologies — Pratt & Whitney Aircraft. He was employed for eight years at Ladish Company, Inc. as quality supervisor and quality manager. Mr. Waldal currently serves on the board of directors as Chairman for Kentucky Manufacturing Assistance Center and is a member of the University of Kentucky College of Engineering Dean's Advisory Council. Mr. Waldal obtained a degree in Non-Destructive Testing from Hutchinson Technology Institute in 1984, a B.A. in Business Management from the University of Kentucky in 1995, and an M.B.A. from Eastern Kentucky University in 1998.

Kenneth R. Morris joined us in January 2005 as Director of Body Armor and was promoted in July 2006 to Vice President of Operations. Mr. Morris has been engaged in the advanced technical ceramic industry for more than 25 years. In 1994, he joined Kyocera Industrial Ceramics Company as Plant Manager. During 1999, he became the Director of North American Operations and in 2004 advanced to the position of Product Development Manager for Impact Protection Materials. He served as Vice President and General Manager of The Carborundum Company from 1986 to 1994. He was formerly employed by Ceradyne from 1983 to 1984 as Materials Manager and as Assistant Vice President of Operations for its silicon carbide division from 1984 to 1986. He began his career with Kyocera International in 1979, working in supply chain management. The ceramic operations he has been responsible for have produced products to support the semiconductor, aerospace, electro-optical and defense markets.

Our officers are appointed by and serve at the discretion of our Board of Directors.

ITEM 1A. RISK FACTORS

This Annual Report on Form 10-K contains forward-looking statements, as described at page 3 of this report under the caption "Note Regarding Forward-Looking Statements." We believe that the risks described below are the most important factors which may cause our actual future results of operations to differ materially from the results projected in the forward-looking statements.

Risks Related to Our Business

A substantial portion of our revenues is derived from the sale of defense related products, primarily ceramic body armor. If demand for ceramic body armor declines, if federal budget appropriations involving our products are reduced, if we fail to obtain new government contracts or delivery orders under existing contracts, or if existing government contracts or orders are cancelled, our revenues, profit and cash flow will be materially and adversely affected.

In recent years, a substantial portion of our revenues has been derived from the sale of defense related products, particularly ceramic body armor, either directly or indirectly to the U.S. government. The sale of defense related products represented 74.0% of our revenues in 2007, 76.2% in 2006 and 65.8% in 2005. We anticipate that a substantial portion of our revenues for the foreseeable future will continue to come from sales of defense related products; however, we cannot assure you that sales of defense related products will continue at current levels and they could decline. Our dependence on defense related business, and on sales of ceramic armor in particular, entails several risks, including those described below.

Our defense related business is highly sensitive to changes in national and international defense and budget priorities. For example, in the years 2003 through 2007, our revenues from the sale of ceramic body armor increased significantly due to the U.S. military's acceleration of its program to equip its soldiers with ceramic body armor systems, in part, because of the war in Iraq. In addition, the market for ceramic body armor increased further in 2006 with the introduction of enhanced side ballistic inserts, known as ESBI, which protect the side of the soldier's torso. If demand for ceramic body armor declines because the number of ceramic body armor systems shipped is sufficient to equip front-line troops, conflicts in the Middle East and other high risk areas subside, U.S. defense budget appropriations are reduced or because of other reasons, our revenues, profit and cash flow from the sale of defense related products would be reduced.

Many defense contracts are awarded in an open competitive bidding process, and our past success in winning government contracts does not guarantee that we will win any new contracts in the future. Our success depends upon our ability to successfully compete for and retain such government contracts. If we, or if prime contractors for which we are a subcontractor, fail to win any future bids, or if we are unable to replace business lost upon cancellation, expiration or completion of a contract, our revenues, profit and cash flow from the sale of defense related products would be reduced.

Moreover, government contracts typically may be cancelled by the government at any time without penalty, other than our right to be reimbursed for certain expenses and inventory. If the U.S. government were to cancel any of our government contracts, our revenues, profit and cash flow would be reduced.

As of December 31, 2007, all orders under the \$747.5 million estimated adjusted maximum value Indefinite Delivery/Indefinite Quantity contract for ceramic body armor awarded to us in August 2004 had been released and the corresponding shipments will be completed in 2008. Moreover, we believe that shipments and orders for the current generation of body armor known as ESAPI (enhanced small arms protective insert) to the U.S. Army may end during 2008. In February 2008, we submitted our quotation to the U.S. Army in response to a solicitation notice regarding the next generation of body armor known as XSAPI. However, there is no guarantee or assurance that we will be successful in winning the contract.

If the performance requirements for ceramic body armor are modified by the U.S. military, we may incur delays or additional costs to change the design of our product, or we may not be able to satisfy the new requirements with our existing ceramic materials and processes. If this were to occur, our costs could increase and our revenues, profit and cash flow would decline.

The ceramic body armor we manufacture must comply with stringent performance specifications established by the U.S. military, such as weight and the level of ballistic protection it must provide, and these specifications may be modified by the military in new procurements, as well as under existing contracts. For example, during the quarter ended March 31, 2005, the U.S. military directed us to modify the specifications of the lightweight ceramic body armor that we had been manufacturing, from the version commonly referred to as SAPI (small arms protective insert), to a revised requirement commonly referred to as ESAPI (enhanced

small arms protective insert). The revised requirement is more difficult to manufacture than the SAPI version. The change to this new design resulted in production delays and increased costs to us during the first quarter of 2005 as we developed new designs to meet the revised requirement and experienced manufacturing inefficiencies. In February 2008, we submitted our quotation to the U.S. Army in response to a solicitation notice regarding the next generation of body armor, known as XSAPI, which is required to meet a higher ballistic threat than the current ESAPI body armor. Although we have produced numerous prototype versions of this new body armor, in the event we receive an order for XSAPI body armor under this procurement, there is no assurance that we will be able to manufacture XSAPI in volume without experiencing delays or additional costs to satisfy the higher ballistic requirements. In the future the U.S. military may make additional changes to the performance requirements for body armor, and we may experience delays or additional costs to satisfy the new requirements, or we may be unable to meet the new requirements at all with our existing ceramic materials and processes. If this were to occur, our revenues from ceramic body armor would decline and our profitability would suffer.

We rely on two critical materials to make ceramic body armor. A delay or inability to obtain sufficient quantities of these materials could limit the amount of body armor we can manufacture and therefore result in reduced revenues, profit and cash flow.

The critical materials required to manufacture our ceramic body armor are boron carbide powder, which is the principal raw material used in the production of the ceramic armor plates, and an ultra-high molecular weight polyethylene textile material, which we laminate to the surface of the ceramic armor plates.

We obtain substantially all of our boron carbide powder from ESK Ceramics, which has been a supplier of boron carbide powder to us for over 30 years. We acquired ESK Ceramics in August 2004, and it is now our subsidiary. If our ESK Ceramics subsidiary experiences production problems, supplies of boron carbide powder may be insufficient from other sources to meet our requirements for ceramic body armor.

The ultra-high molecular weight polyethylene textile material is available in the United States only from Honeywell International, Inc., under the brand name Spectra Shield®, and from Royal DSM N.V., under the brand name Dyneema®. Although we believe that sufficient quantities of these materials will be available to fulfill our projected needs, a delay or interruption in the supply of either of these materials could adversely affect our ability to fulfill our current orders for ceramic body armor.

If a delay or reduction in supplies of boron carbide powder or either Spectra Shield or Dyneema occurs, we may not be able to ship all of our orders for ceramic body armor, which could result in reduced revenues, profit and cash flow.

We have recently added significant manufacturing capacity. If demand for our products declines, we may have inefficient or under-utilized capacity, and our gross margins, profit and cash flow may suffer.

In response to the increased demand for ceramic body armor for military personnel and cam rollers for diesel engines, as well as our other products, we have added significant manufacturing capacity since early 2002.

Demand for our products, particularly ceramic armor and cam rollers, may not remain at levels sufficient to utilize all of the manufacturing capacity that we have added since early 2002. Much of our manufacturing facilities and production equipment, such as our furnaces and hot presses, are special purpose in nature and cannot be adapted easily to make other products. Also, a substantial amount of the boron carbide powder produced by ESK Ceramics is currently used by us and our competitors to make ceramic body armor. If the demand for ceramic body armor declines substantially from current levels, ESK Ceramics may have significant under-utilized capacity for boron carbide powder. Therefore, a substantial decline in demand for our ceramic body armor or cam rollers could result in significant excess manufacturing capacity, which would result in under absorption of overhead expense and reduced profit.

Our two largest customers for ceramic cam rollers are developing new diesel truck engines that were introduced in 2007 in their diesel trucks. These new diesel truck engines are designed to use steel cam rollers

rather than our more expensive ceramic cam rollers. We believe these customers will be successful in using steel cam rollers instead of our ceramic cam rollers. Consequently, sales of cam rollers to these two customers declined beginning in 2007 and we expect further declines in 2008. Unless we can replace this lost business with sales of our ceramic cam rollers to new customers, our revenues, profits and cash flow from this product line will decline further in 2008.

If we fail to increase our non-defense revenue, and if the demand for ceramic body armor decreases, our revenues, profit and cash flow will be materially and adversely affected.

We currently receive more than 74.0% of our revenues and more than 90.0% of our profits from sales of defense-related products. Because our dependence on defense-related products exposes us to significant risks, part of our business strategy is to continue to increase our non-defense revenue base by identifying new products and markets for our advanced technical ceramics, and by increasing sales to our existing non-defense customers. Our ability to execute this strategy successfully depends, in part, on our ability to increase market acceptance of our advanced technical ceramics as a replacement for materials such as metals, plastics and traditional ceramics. While advanced technical ceramics have certain advantages over other materials, such as the ability to withstand extremely high temperatures and combining hardness with light weight, they are more expensive to produce. As a result, the market for advanced technical ceramic products may be limited to high-end applications where price is not a critical competitive factor, where the characteristics of advanced technical ceramics may justify the higher costs compared to other materials or where other materials are not suitable. Due to these limitations on the market for advanced technical ceramics, the market for our products may not grow as we anticipate and we may not be able to increase our non-defense revenue base. If we are unable to execute this strategy, and if the demand for ceramic body armor decreases, our revenues, profit and cash flow will be materially and adversely affected.

Growth in our operations may strain our resources, and if we fail to successfully manage potential future growth, we could incur higher operating costs and delays in the production of our products, which could result in reduced revenues, profit and cash flow.

The increase in orders for ceramic body armor for military personnel, as well as the introduction of new products, is placing, and will continue to place, a significant strain on our operational, financial and managerial resources and personnel. To effectively manage potential future growth, we must continue to:

- add manufacturing capacity and personnel;
- implement and improve our operational, financial and management information systems;
- develop the management skills of our managers and supervisors;
- add new management personnel; and
- train, motivate and manage our employees.

Any failure to effectively manage growth could result in increased operating costs and delays in the development and production of our products. If this occurs, our revenues, profit and cash flow could decline.

We may generate less profit than expected or even lose money on our fixed price government contracts.

Most of our government contracts provide for a predetermined, fixed price for the products we sell regardless of the costs we incur. When making proposals for fixed-price contracts, we must rely on our ability to accurately estimate our costs and ability to manufacture and deliver the products on time and at a reasonable profit. Our actual production costs may, however, exceed forecasts due to unanticipated delays or increased cost of materials, components, labor, capital equipment or other factors. As a result, we may incur losses on fixed price contracts that we had expected to be profitable, or such contracts may be less profitable than we expected, which could have a material adverse effect on our business, financial condition and results of operations.

Our long term investments are subject to risks which may cause losses and affect the liquidity of these investments.

Our long term investments at December 31, 2007 included \$38.1 million of auction rate securities net of a temporary impairment charge of \$0.8 million against other comprehensive income and an other than temporary impairment charge of \$2.1 million against current earnings. The Company's investments in auction rate securities represent interests in collateralized debt obligations supported by pools of residential and commercial mortgages or credit cards, insurance securitizations and other structured credits, including corporate bonds. These auction rate securities are intended to provide liquidity via an auction process that resets the applicable interest rate at predetermined calendar intervals, allowing investors to either roll over their holdings or gain immediate liquidity by selling such interests at par. During the second half of the year 2007, the auctions for these securities failed. As a result of current negative conditions in the global credit markets, auctions for our investment in these securities have recently failed to settle on their respective settlement dates. Consequently, the investments are not currently liquid through the normal auction process. If they remain illiquid, and a buyer is not found outside the auction process, the value of these securities may decline further.

We review impairments associated with the above in accordance with Emerging Issues Task Force (EITF) 03-1 and FSP SFAS 115-1 and 124-1, "The Meaning of Other-Than-Temporary-Impairment and Its Application to Certain Investments," to determine the classification of the impairment as "temporary" or "other-than-temporary." A temporary impairment charge results in an unrealized loss being recorded in the other comprehensive income component of stockholders' equity. Such an unrealized loss does not reduce net income for the applicable accounting period because the loss is not viewed as other-than-temporary. We believe that a portion of the impairment of our auction rate securities investments is temporary and a portion is other-than-temporary.

Our business is subject to various laws and regulations favoring the U.S. government's contractual position, and our failure to comply with such laws and regulations could harm our operating results and prospects.

As a contractor to the U.S. government, we must comply with laws and regulations relating to the formation, administration and performance of federal government contracts that affect how we do business with our customers and may impose added costs on our business. These rules generally favor the U.S. government's contractual position. For example, these regulations and laws include provisions that allow unsuccessful bidders to protest or challenge contracts we have been awarded, and allow the government to unilaterally terminate, reduce or modify our government contracts.

The accuracy and appropriateness of certain costs and expenses used to substantiate our direct and indirect costs for the U.S. government under fixed-price contracts are subject to extensive regulation and audit by the Defense Contract Audit Agency, an agency of the U.S. Department of Defense. Responding to governmental audits, inquiries or investigations may involve significant expense and divert management's attention. Our failure to comply with these or other laws and regulations could result in contract termination, suspension or debarment from contracting with the federal government, civil fines and damages and criminal prosecution and penalties. Any of these consequences could have a material adverse effect on our business, financial condition, results of operations and liquidity.

We currently depend entirely on 3M Unitek for sales of our ceramic orthodontic brackets. If we are unable to maintain our existing level of business with 3M Unitek our revenues, profit and cash flow from this product line will decline.

We sell our ceramic orthodontic brackets exclusively to 3M Unitek under a five year supply agreement that we entered into with 3M Unitek in December 2005. This supply agreement replaces our original agreement with 3M Unitek that would have expired in September 2007, under which 3M Unitek was required to purchase all ceramic orthodontic brackets exclusively from us, and we were permitted to sell ceramic orthodontic brackets only to 3M Unitek. Under the terms of the new agreement, 3M Unitek will continue to

purchase their Clarity and Transcend brand ceramic orthodontic product lines exclusively from us for as long as 3M Unitek continues to sell those products. The new agreement further stipulates that Unitek must purchase from Ceradyne at least 50% of the ceramic orthodontic brackets 3M Unitek requires for next generation designs, which it introduced in 2007. Except under limited circumstances, Ceradyne is not permitted to sell ceramic orthodontic brackets to any other customers under the new agreement. As a result of our agreement with 3M Unitek, our revenue from ceramic orthodontic brackets is dependent entirely upon 3M Unitek. 3M Unitek also offers traditional stainless steel orthodontic brackets. We cannot guarantee that 3M Unitek will devote substantial marketing efforts to the sale of our ceramic orthodontic brackets, or that 3M Unitek will not reassess its commitment to our product. If 3M Unitek fails to actively market our ceramic orthodontic brackets or decides to promote a competing product over ours, this could cause the sales of our ceramic orthodontic brackets to decline.

Moreover, the first of our two patents for our ceramic orthodontic brackets, which we jointly own with 3M Unitek, expired in September 2007. Consequently, we may not be able to prevent third parties from manufacturing and selling competitive ceramic orthodontic brackets. Ceramic orthodontic brackets manufactured and sold by third parties may be less expensive than ours and may cause sales of our ceramic orthodontic brackets to decline either as a result of pricing pressure or loss of market share.

In addition, the future success of our ceramic orthodontic brackets depends on our ability to maintain and increase market acceptance for our product compared to other competitive solutions, including traditional stainless steel brackets and newer products such as transparent plastic orthodontic aligners, synthetic sapphire brackets and other ceramic brackets. If 3M Unitek reduces its purchases of ceramic orthodontic brackets from us or if competitive products gain market share, the sales of our ceramic orthodontic brackets may decline, resulting in a decrease in our revenues, profit and cash flow.

Our business is subject to risks associated with doing business outside the United States.

Shipments to customers outside of the United States accounted for approximately 18.0% of our sales in 2007, 15.9% of our sales in 2006, and 26.1% of our sales in 2005. The significant increase in 2005 was due primarily to our acquisition of ESK Ceramics in August 2004, whose operations have been consolidated with ours since September 1, 2004. ESK Ceramics' operations are located in Germany and France. ESK Ceramics' sales to customers located outside of the United States represented approximately 65.9% of its total sales during 2007, approximately 57.1% of its total sales during 2006, and approximately 64.4% of its total sales during 2005. We expect sales of our products in the Asian market will increase as a result of the opening, in June 2007, of our new 98,000 square foot facility in Tianjin, China, where we manufacture ceramic crucibles, primarily for the Chinese market. We plan to commence construction during 2008 of an additional 200,000 square foot facility in Tianjin, China to expand production capacity for ceramic crucibles, which we believe will lead to further growth in sales in the Asian market.

We anticipate that international shipments will account for a significant portion of our sales for the foreseeable future. Therefore, the following risks associated with international business activities could have material adverse effects on our performance:

- burdens to comply with multiple and potentially conflicting foreign laws and regulations, including export requirements, tariffs and other barriers, health and safety requirements, and unexpected changes in any of these factors;
- difficulty in staffing and managing international operations;
- differences in intellectual property protections;
- difficulty in obtaining export licenses from the U.S. government for sales of our defense-related products;
- potentially adverse tax consequences due to overlapping or differing tax structures;

- fluctuations in currency exchange rates; and
- risks associated with operating a business in a potentially unstable political climate.

We have traditionally invoiced our sales from the United States to customers in foreign countries in U.S. dollars. Consequently, if the U.S. dollar becomes more expensive relative to the currencies of our foreign customers, the price of our products that we export from the United States to those countries will rise and our sales into those countries may fall. In addition, in the future, we may be required to denominate foreign sales in the local currencies of our customers. In that case, if the U.S. dollar were to become more expensive relative to the currencies of our foreign customers, we would receive fewer U.S. dollars for each unit of foreign currency that we receive when our customers pay us. Therefore, a more expensive U.S. dollar would cause us to incur losses upon the conversion of accounts receivable denominated in foreign currencies. Such losses could harm our results of operations.

Our ESK Ceramics subsidiary invoices approximately 56.5% of its sales in Euros. ESK Ceramics' sales to customers located in the United States are invoiced in U.S. dollars. If the Euro becomes more expensive relative to the currencies of ESK Ceramics' customers located outside the European Union, the price of its products sold to customers in those countries will rise and its sales into those countries may fall.

We may make future acquisitions which may be difficult to integrate, divert management resources, result in unanticipated costs, or dilute our stockholders.

Part of our continuing business strategy is to make acquisitions of, or investments in, companies, products or technologies that complement our current products, enhance our market coverage, technical capabilities or production capacity, or offer growth opportunities. Future acquisitions could pose numerous risks to our operations, including:

- we may have difficulty integrating the purchased operations, technologies or products;
- we may incur substantial unanticipated integration costs;
- assimilating the acquired businesses may divert significant management attention and financial resources from our other operations and could disrupt our ongoing business;
- acquisitions could result in the loss of key employees, particularly those of the acquired operations;
- we may have difficulty retaining or developing the acquired businesses' customers;
- acquisitions could adversely affect our existing business relationships with suppliers and customers;
- we may fail to realize the potential cost savings or other financial benefits and/or the strategic benefits of the acquisitions; and
- we may incur liabilities from the acquired businesses for infringement of intellectual property rights or other claims, and we may not be successful in seeking indemnification for such liabilities or claims.

In connection with these acquisitions or investments, we could incur debt, amortization expenses related to intangible assets, large and immediate write-offs, assume liabilities, or issue stock that would dilute our current stockholders' percentage of ownership. We may not be able to complete acquisitions or integrate the operations, products or personnel gained through any such acquisition without a material adverse effect on our business, financial condition and results of operations.

The cost of electricity is a significant portion of our cost of product sales. An increase in the cost of electricity may cause our profit margins to decline.

Electricity is essential for the production of our products and comprises a significant portion of our cost of product sales. The cost of electricity for our manufacturing operations in the United States and Europe was approximately \$13.5 million during 2007, approximately \$11.1 million during 2006 and approximately \$8.4 million during 2005. Over the last several years, the cost of electricity has increased, particularly in California where a significant portion of our manufacturing facilities are located. Fluctuations in the cost of

electricity affect our ability to accurately forecast future energy costs and consequently our profitability. If the cost of electricity were to increase substantially, our gross profit margins may decline.

We may not be able to adequately safeguard our intellectual property rights and trade secrets from unauthorized use, and we may become subject to claims that we infringe on others' intellectual property rights.

We rely on a combination of patents, trade secrets, trademarks, and other intellectual property laws, nondisclosure agreements with employees and customers and other protective measures to preserve our proprietary rights to our products and production processes. These measures afford only limited protection and may not preclude competitors from developing products or processes similar or superior to ours. Moreover, the laws of certain foreign countries do not protect intellectual property rights to the same extent as the laws of the United States.

Although we implement protective measures and intend to defend our proprietary rights, these efforts may not be successful. From time to time, we may litigate within the United States or abroad to enforce our issued or licensed patents, to protect our trade secrets and know-how or to determine the enforceability, scope and validity of our proprietary rights and the proprietary rights of others. For example, we are currently involved in two lawsuits in Germany that we initiated to enforce our proprietary rights. Enforcing or defending our proprietary rights could be expensive, requires management's attention and might not bring us timely or effective relief.

Furthermore, third parties may assert that our products or processes infringe their patent rights. Our patents may be challenged, invalidated or circumvented. Although there are no pending or threatened intellectual property lawsuits against us, we may face litigation or infringement claims in the future. Infringement claims could result in substantial costs and diversion of our resources even if we ultimately prevail. A third party claiming infringement may also obtain an injunction or other equitable relief, which could effectively block the distribution or sale of allegedly infringing products. Although we may seek licenses from third parties covering intellectual property that we are allegedly infringing, we may not be able to obtain any such licenses on acceptable terms, if at all.

Our ability to operate effectively could be impaired if we were to lose the services of our key personnel, or if we are unable to recruit qualified managers and key personnel in the future.

Our success depends on the continued service of our management team and key personnel, including Joel P. Moskowitz, our Chairman and Chief Executive Officer and President; David P. Reed, our Vice President, and President of North American Operations; Jerrold J. Pellizzon, our Chief Financial Officer and Corporate Secretary; and Thomas Jüngling, the President of our ESK Ceramics subsidiary. Mr. Moskowitz was diagnosed with non-Hodgkin's lymphoma in October 2004. He completed chemotherapy treatments in January 2005, and his current diagnosis indicates that the non-Hodgkin's lymphoma is in remission.

If Mr. Moskowitz becomes unable to continue working due to health reasons, or if one or more of these individuals were to resign or otherwise terminate their employment with us, we could experience a loss of sales, delays in new product development and diversion of management resources, and we may have difficulty replacing any of these individuals. We do not have employment agreements or key person insurance on any of our executive employees.

Competition for qualified managers and key personnel is intense and we may not be able to recruit and retain such personnel. If we are unable to retain our existing managers and employees or hire and integrate new personnel, we may experience operating inefficiencies, production delays and reduced profitability.

Our manufacturing facilities are subject to a number of operational risks, including hazards associated with ceramic manufacturing and natural disasters, any of which could have a material adverse impact on our productivity and results of operations.

Due to the nature of our business, we are exposed to hazards associated with ceramic manufacturing, such as:

- accidents or mechanical failure;
- fires or explosions of furnaces; and
- employee exposure to extreme temperatures or hazardous substances.

In addition, the location of our facilities exposes us to potential earthquakes and other natural disasters. These hazards may cause personal injury, loss of life and damage to property, which could lead to a substantial interruption or suspension of operations, potential loss of customers and sales, government fines and lawsuits by injured persons. Any such consequences could have an adverse effect on the productivity and profitability of a particular manufacturing facility or on us as a whole.

Defects in our products could harm our reputation for quality products, increase our operating expenses, reduce sales of our products and impact cash flow.

Our products have in the past contained, and may in the future contain, errors or defects that may be detected at any point in the life of the products. Such errors could result in delays in shipping and sales during the period required for their correction and additional expense associated with their reworking or replacement. Real or perceived defects in our products may result in product returns, loss of sales, delays in market acceptance, injury to our reputation and increased warranty costs, which could reduce our sales and profit. For example, in March 2002, the U.S. government notified us that several lots of our SAPI lightweight ceramic body armor failed to pass ballistics reverification tests. As a result, we stopped production of our SAPI product, modified the design of our product and resumed shipping approximately four months later. In addition, we agreed to correct or replace at our expense all supplies of our SAPI product sales that did not meet the original contractual requirements.

If we are unable to compete successfully against current and future competitors, our revenues could decline.

Our products compete with advanced technical ceramic products from other companies, as well as with high strength steel alloys and plastic products.

When competing with other advanced technical ceramic products, we believe the principal competitive factors are:

- manufacturing capacity and the ability to deliver products;
- price;
- product performance;
- material specifications;
- application engineering capabilities;
- customer support; and
- reputation.

When competing with high strength steel alloys and plastic products, we may not be able to compete effectively when price is a primary consideration, because our products are typically more expensive as a result of higher manufacturing costs associated with the production of advanced technical ceramics.

Some of our competitors include Armor Works, Ceramtec, the Armor Holdings and Cercom subsidiaries of BAE Systems, CoorsTek, Denka, Momentive Performance Materials, Hitachi, HC Starck, Kyocera's Industrial Ceramics Group, Morgan, Saint Gobain, Sintec, Spectra-Mat, UK Abrasives, Vesuvius C-E Minerals, NHTC, Holtec, Nukem and General Electric. Many of our current or potential competitors have greater financial, marketing and technical resources than we do. If we fail to compete successfully against our current or future competitors, our revenues, profit and cash flow could decline.

Uninsured losses arising from third party claims brought against us could result in payment of substantial damages, which would decrease our cash reserves and could harm our profit and cash flow.

Our products are used in applications where the failure to use our products properly or their malfunction could result in serious bodily injury or death. We may not have adequate insurance to cover the payment of any potential claim related to such injuries or deaths. Insurance coverage may not continue to be available to us or, if available, may be at a significantly higher cost.

We are subject to extensive government regulation, and our failure or inability to comply with these regulations could subject us to penalties and result in a loss of our government contracts, which could reduce our revenues, profit and cash flow.

We must comply with and are affected by various government regulations that impact our operating costs, profit margins and our internal organization and operation of our business. Furthermore, we have production contracts with governmental entities and are subject to additional rules, regulations and approvals applicable to government contractors. We are also subject to routine audits to assure our compliance with these requirements. Our failure to comply with these regulations, rules and approvals could result in the impositions of penalties and the loss of our government contracts and disqualification as a U.S. government contractor. As a result, our revenues, profit and cash flow could be reduced.

In addition, a number of our employees involved with defense related business are required to obtain security clearances from the U.S. government. Our business may suffer if we or our employees are unable to obtain the security clearances that are required.

Like other companies operating internationally, we are subject to the Foreign Corrupt Practices Act and other laws which prohibit improper payments to foreign governments and their officials by U.S. and other business entities. Violations of the Foreign Corrupt Practices Act may result in severe criminal penalties, which could have a material adverse effect on our business, financial condition, results of operations and liquidity.

If we fail to comply with environmental laws and regulations, we could incur an increase in our operating costs and a decrease in our profit and cash flow.

We are subject to a variety of environmental regulations relating to the use, storage, discharge and disposal of hazardous materials used to manufacture our products. Authorities could impose fines, suspend production, alter our manufacturing processes, or stop our operations if we do not comply with these regulations.

Until 1997, we produced certain products using beryllium oxide, which is highly toxic in powder form. This powder, if inhaled, can cause chronic beryllium disease in a small percentage of the population. We have been sued in the past by former employees and by employees of one of our customers and by their family members alleging that they had contracted chronic beryllium disease as a result of exposure to beryllium oxide powders used in our products. The last of these claims was settled in 2002, and all of these claims have been dismissed without our incurring material liability. We may not, however, be able to avoid future liability to persons who may allege that they contracted chronic beryllium disease as a result of exposure to the beryllium oxide we used in prior years.

Any failure to comply with current or subsequently enacted environmental statutes and regulations could subject us to liabilities, fines or the suspension of production. Furthermore, any claims asserted against us in

the future related to exposure to beryllium oxide powder may not be covered by insurance. Even if covered, the amount of insurance may be inadequate to cover any adverse judgment.

Fines and other punishments imposed on us for environmental violations and expenses we incur to remedy or comply with environmental regulations and future liability for incidences of chronic beryllium disease contracted by employees or employees of customers would decrease our cash reserves and could harm our profitability.

Risks Related to our Common Stock

Our stock price has been volatile, and the value of an investment in our common stock may decline.

The market price and trading volume of our common stock has been subject to significant volatility, and this trend may continue. The value of our common stock may decline regardless of our operating performance or prospects. Factors affecting our market price include:

- initiation of coverage by securities analysts, securities analysts' buy/sell recommendations and any expressed beliefs of securities analysts regarding our business prospects or estimated trading multiples;
- our perceived prospects;
- variations in our operating results and whether we have achieved our key business targets;
- the limited number of shares of our common stock available for purchase or sale in the public markets;
- sales or purchases of large blocks of our stock;
- changes in, or our failure to meet, our earnings estimates;
- differences between our reported results and those expected by investors and securities analysts;
- decreases in our trading multiples on an absolute basis or relative to comparable companies;
- announcements of new contracts by us or our competitors;
- market reaction to any future acquisitions, joint ventures or strategic investments announced by us or our competitors;
- developments in the financial markets;
- market reaction to any adverse publicity or news stories; and
- general economic, political or stock market conditions.

Recent events have caused stock prices for many companies, including ours, to fluctuate in ways unrelated or disproportionate to their operating performance. The general economic, political and stock market conditions that may affect the market price of our common stock are beyond our control. The market price of our common stock at any particular time may not remain the market price in the future. In the past, securities class action litigation has been instituted against companies following periods of volatility in the market price of their securities. Any such litigation, if instituted against us, could result in substantial costs and a diversion of management's attention and resources.

Delaware law may delay or prevent a change in control, and may discourage bids for our common stock at a premium over its market price.

We are subject to the provisions of section 203 of the Delaware General Corporation Law. These provisions prohibit large stockholders, in particular a stockholder owning 15% or more of the outstanding voting stock, from consummating a merger or combination with a corporation unless this stockholder receives board approval for the transaction or 66⅔% of the shares of voting stock not owned by the stockholder approve the merger or transaction. These provisions of Delaware law may have the effect of delaying,

deferring or preventing a change in control, and may discourage bids for our common stock at a premium over its market price.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

We serve our markets through six operating segments with manufacturing facilities in several locations across the United States, one in Canada, one in China and two locations in Europe — Germany and France. Please see the table under the caption “Operating Divisions and Facilities” in Item 1 of this report for a summary of our facilities and products comprising our six operating segments.

ITEM 3. LEGAL PROCEEDINGS

In August, September and December 2006, shareholder derivative lawsuits were filed in the California Superior Court for Orange County, purportedly on behalf of Ceradyne against various current and former officers and directors of the Company relating to alleged backdating of stock options. Each state court complaint alleged claims for breach of fiduciary duty, abuse of control, gross mismanagement, waste of corporate assets, unjust enrichment, accounting, rescission, constructive trust, and violations of California Corporations Code. All state court actions have been consolidated into one case, designated, *In re Ceradyne, Inc. Derivative Litigation*, Orange County Superior Court, Case No. 06-CC-00156.

In September and December 2006, shareholder derivative lawsuits were filed in the United States District Court for the Central District of California, purportedly on behalf of Ceradyne against various current and former officers and directors of the Company relating to alleged backdating of stock options. All federal court actions have been consolidated into one case, designated, *In re Ceradyne, Inc. Derivative Litigation*, Master File No. SA CV 06-919 JVS. The consolidated federal action alleges, pursuant to a first amended consolidated complaint filed on September 17, 2007, claims for violations of Section 10(b) of the Securities Exchange Act and Rule 10b-5 thereunder, violations of Section 14(a) of the Securities Exchange Act, violations of Section 20(a) of the Securities Exchange Act, insider selling under the California Corporations Code, as well as common law claims for accounting, breach of fiduciary duty, aiding and abetting breaches of fiduciary duty, unjust enrichment, rescission and waste.

The plaintiffs in both the state and federal actions seek to require the individual defendants to rescind stock options they received which have an exercise price below the closing price of the Company’s common stock on the date of grant, to disgorge the proceeds of options exercised, to reimburse the Company for damages of an unspecified amount, and also seek certain equitable relief, attorneys’ fees and costs.

On October 26, 2007, the Company and the individual defendants filed motions to dismiss the first amended consolidated complaint in the federal action. In December 2007, plaintiffs filed a second amended consolidated complaint. The Company and the individual defendants have entered into a stipulation providing that motions to dismiss the second amended consolidated complaint will be filed by February 29, 2008 and that the hearing on the motions will be held on May 5, 2008. The plaintiffs in the state court action have agreed to voluntarily stay the state court action until May 2008, pending the federal court’s rulings on the motions to dismiss.

In summary, there are currently two shareholder derivative actions pending which contain substantially similar allegations. The cases filed in the Orange County Superior Court have been consolidated into one case, designated, *In re Ceradyne, Inc. Derivative Litigation*, Orange County Superior Court, Case No. 06-CC-00156. The cases filed in the United States District Court for the Central District of California have all been consolidated into one case, designated, *In re Ceradyne, Inc. Derivative Litigation*, Master File No. SA CV 06-919 JVS.

Settlement discussions have been actively pursued in both the state and federal actions, however, no agreements have been reached to date. The impact of the outcome of these lawsuits is undeterminable at this time.

A class action lawsuit was filed on March 23, 2007, in the California Superior Court for Orange County (Civil Action No. 07CC01232), in which it is asserted that the representative plaintiff, a former Ceradyne employee, and the putative class members, were not paid overtime at an appropriate overtime rate. The complaint alleges that the purportedly affected employees should have had their regular rate of pay for purposes of calculating overtime, adjusted to reflect the payment of a bonus to them for the four years preceding the filing of the complaint. The complaint further alleges that a waiting time penalty should be assessed for the failure to timely pay the correct overtime payment. Ceradyne has filed an answer denying the material allegations of the complaint. We believe that the lawsuit is without merit on the basis that our bonus policy is discretionary and is not of the type that is subject to inclusion in the regular hourly rate for purposes of calculating overtime, and we intend to vigorously defend this action. We also believe that the putative class members are not similarly situated and, therefore, this case should not proceed as a class action.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote of security holders during the fourth quarter of 2007.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the Nasdaq Stock Market under the symbol "CRDN." The following table shows the high and low closing sale prices for our common stock as reported by the Nasdaq Stock Market during the calendar quarters indicated:

	<u>High</u>	<u>Low</u>
Year Ended December 31, 2006		
First Quarter	\$62.51	\$44.71
Second Quarter	\$56.06	\$43.07
Third Quarter	\$54.59	\$41.09
Fourth Quarter	\$58.66	\$40.26
Year Ended December 31, 2007		
First Quarter	\$61.75	\$50.56
Second Quarter	\$74.72	\$55.20
Third Quarter	\$83.59	\$64.95
Fourth Quarter	\$78.19	\$42.27

As of February 9, 2008, there were 330 holders of record of our common stock.

We have never declared or paid cash dividends on our common stock and do not plan to pay any cash dividends in the near future. Our current policy is to retain all funds and earnings for use in the operation and expansion of our business.

We did not sell any equity securities during the year ended December 31, 2007 that were not registered under the Securities Act of 1933.

ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data as of December 31, 2003, 2004 and 2005 and for the years ended December 31, 2003 and 2004 are derived from our audited consolidated financial statements for those periods, which are not included in this report. The selected consolidated financial data as of

December 31, 2006 and 2007 and for the years ended December 31, 2005, 2006 and 2007 are derived from our audited consolidated financial statements which are included in this report beginning on page F-1. The following data is qualified in its entirety by and should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our consolidated financial statements and the related notes included elsewhere in this report.

	Year Ended December 31,				
	2007 ⁽¹⁾	2006	2005	2004 ⁽²⁾	2003
	(amounts in thousands, except per share data)				
Statement of Income Data:					
Net sales	\$756,835	\$662,888	\$368,253	\$215,612	\$101,473
Cost of product sales	<u>450,787</u>	<u>401,991</u>	<u>237,115</u>	<u>146,518</u>	<u>72,124</u>
Gross profit	306,048	260,897	131,138	69,094	29,349
Operating expenses:					
Selling	26,917	22,919	20,694	8,266	2,440
General and administrative	40,801	35,293	21,014	14,131	7,799
Research and development	<u>17,552</u>	<u>9,909</u>	<u>7,802</u>	<u>3,341</u>	<u>2,111</u>
Total operating expenses	<u>85,270</u>	<u>68,121</u>	<u>49,510</u>	<u>25,738</u>	<u>12,350</u>
Income from operations	220,778	192,776	81,628	43,356	16,999
Other income (expense):					
Royalty income	174	120	145	146	151
Interest income	12,394	6,687	434	476	136
Miscellaneous, net	(2,599)	(919)	275	1,602	34
Interest expense	<u>(4,204)</u>	<u>(4,105)</u>	<u>(9,252)</u>	<u>(1,661)</u>	<u>(32)</u>
Total other income (expense)	<u>5,765</u>	<u>1,783</u>	<u>(8,398)</u>	<u>563</u>	<u>289</u>
Income before provision for income taxes	226,543	194,559	73,230	43,919	17,288
Provision for income taxes	<u>82,278</u>	<u>66,155</u>	<u>26,452</u>	<u>16,346</u>	<u>6,051</u>
Net income	<u>\$144,265</u>	<u>\$128,404</u>	<u>\$ 46,778</u>	<u>\$ 27,573</u>	<u>\$ 11,237</u>
Net income per share:					
Basic	\$ 5.29	\$ 4.77	\$ 1.90	\$ 0.52	\$ 0.14
Diluted	\$ 5.20	\$ 4.69	\$ 1.86	\$ 0.51	\$ 0.14
Weighted average number of common shares outstanding:					
Basic	27,252	26,924	24,635	21,442	19,094
Diluted	27,732	27,352	25,107	21,900	19,709

	As of December 31,				
	2007	2006	2005	2004	2003
	(amounts in thousands)				
Balance Sheet Data:					
Cash and cash equivalents	\$155,103	\$ 13,547	\$ 91,542	\$ 4,521	\$ 11,462
Short term investments	29,582	190,565	7,839	10,041	19,202
Working capital	353,923	332,063	212,309	78,389	60,519
Total assets	783,286	613,815	430,193	316,354	104,207
Total long-term debt	121,000	121,000	121,000	109,725	—
Stockholders' equity	578,629	406,611	250,520	135,041	86,777

- (1) The operations of Minco Inc., have been consolidated with ours since July 10, 2007. The operations of Ceradyne Boron Products have been consolidated with ours since September 1, 2007.
- (2) The operations of ESK Ceramics have been consolidated with ours since September 1, 2004.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read together with "Selected Consolidated Financial Data," and our consolidated financial statements and related notes included elsewhere in this report. This discussion and analysis contains forward-looking statements that involve risks and uncertainties. We base these statements on assumptions that we consider reasonable. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors discussed in "Note Regarding Forward-Looking Statements," "Item 1A — Risk Factors," and elsewhere in this report.

Overview

We develop, manufacture and market advanced technical ceramic products, ceramic powders and components for defense, industrial, automotive/diesel and commercial applications. Our products include:

- lightweight ceramic armor for soldiers and other military applications;
- ceramic industrial components for erosion and corrosion resistant applications;
- ceramic powders, including boron carbide, boron nitride, titanium diboride, calcium hexaboride, and zirconium diboride, which are used in manufacturing armor and a broad range of industrial products; and BORONEIGE® boron nitride powder for cosmetic products;
- evaporation boats for metallization of materials for food packaging and other products;
- durable, reduced friction, ceramic diesel engine components;
- functional and frictional coatings primarily for automotive applications;
- translucent ceramic orthodontic brackets;
- ceramic-impregnated dispenser cathodes for microwave tubes, lasers and cathode ray tubes;
- ceramic crucibles for melting silicon in the photovoltaic solar cell manufacturing process;
- ceramic missile radomes (nose cones) for the defense industry;
- fused silica powders for industrial applications and ceramic crucibles;
- neutron absorbing materials, structural and non-structural, in combination with aluminum metal matrix composites that serve as part of a barrier system for spent fuel wet and dry storage in the nuclear industry, and non-structural neutron absorbing materials for use in the transport of nuclear fresh fuel rods;
- nuclear chemistry products for use in pressurized water reactors and boiling water reactors; and
- boron dopant chemicals for semiconductor silicon manufacturing and for ion implanting of silicon wafers.

Our customers include the U.S. government, prime government contractors and large industrial, automotive, diesel and commercial manufacturers in both domestic and international markets.

We conduct our operations primarily through six operating segments. The following table includes a summary of our products by applications for our six segments.

Operating Segment and Facility Location	Products
<i>Ceradyne Advanced Ceramic Operations</i> Costa Mesa and Irvine, California Approximately 240,000 square feet Lexington, Kentucky Approximately 115,000 square feet Wixom, Michigan Approximately 29,000 square feet	<i>Defense Applications:</i> <ul style="list-style-type: none"> • Lightweight ceramic armor <i>Industrial Applications:</i> <ul style="list-style-type: none"> • Ceralloy® 147 SRBSN wear parts • Precision ceramics <i>Automotive/Diesel Applications:</i> <ul style="list-style-type: none"> • Ceralloy® 147 SRBSN automotive/diesel engine parts <i>Commercial Applications:</i> <ul style="list-style-type: none"> • Ceramic orthodontic brackets • Components for medical devices
<i>ESK Ceramics</i> Kempton, Germany Approximately 544,000 square feet Bazet, France Approximately 88,000 square feet	<i>Defense Applications:</i> <ul style="list-style-type: none"> • Boron carbide powders for body armor <i>Industrial Applications:</i> <ul style="list-style-type: none"> • Ceramic powders: boron carbide, boron nitride, titanium diboride, calcium hexaboride and zirconium diboride • Silicon carbide parts • Evaporation boats for the packaging industry • High performance pump seals <i>Automotive/Diesel Applications:</i> <ul style="list-style-type: none"> • EKagrip® functional and frictional coatings <i>Commercial Applications:</i> <ul style="list-style-type: none"> • BORONEIGE® boron nitride powder for cosmetics
<i>Ceradyne Semicon Associates</i> Lexington, Kentucky Approximately 35,000 square feet	<i>Industrial Applications:</i> <ul style="list-style-type: none"> • Ceramic-impregnated dispenser cathodes for microwave tubes, lasers and cathode ray tubes • Samarium cobalt magnets
<i>Ceradyne Thermo Materials</i> Scottdale and Clarkston, Georgia Approximately 132,000 square feet Tianjin, China Approximately 98,000 square feet Midway, Tennessee Approximately 105,000 square feet	<i>Defense Applications:</i> <ul style="list-style-type: none"> • Missile radomes (nose cones) • High purity fused silica used to manufacture missile radomes (nose cones) <i>Industrial Applications:</i> <ul style="list-style-type: none"> • Glass tempering rolls • Metallurgical tooling • Castable and other fused silica products • Crucibles for photovoltaic solar cell applications • Turbine components used in aerospace applications
<i>Ceradyne Canada</i> Chicoutimi, Quebec, Canada Approximately 86,000 square feet	<i>Industrial Applications:</i> <ul style="list-style-type: none"> • Boral® structural neutron absorbing materials • Metal matrix composite structures

Operating Segment and Facility Location	Products
<i>Ceradyne Boron Products</i>	<i>Industrial Applications:</i>
Quapaw, Oklahoma	Nuclear Applications:
Approximately 128,000 square feet	<ul style="list-style-type: none"> • Nuclear chemistry products for use in pressurized water reactors and boiling water reactors • Radioactive containment for use in spent fuel transport and storage • Burnable poisons for coating of uranium fuel pellets
	<i>Semiconductor Applications:</i>
	<ul style="list-style-type: none"> • P-dopants for semiconductor silicon manufacturing • P-dopants for ion implanting of silicon wafers

The tables below show, for each of our six segments, revenues and income before provision for income taxes in the periods indicated.

Segment revenues (in millions):

	Year Ended December 31,		
	2007	2006	2005
Advanced Ceramic Operations	\$587.3	\$528.7	\$242.8
ESK Ceramics	160.6	148.1	123.2
Semicon Associates	8.0	9.1	7.5
Thermo Materials	32.0	15.0	12.2
Ceradyne Canada	3.9	2.4	—
Ceradyne Boron Products	7.7	—	—
Inter-segment elimination	(42.7)	(40.4)	(17.4)
Total revenue from external customers	\$756.8	\$662.9	\$368.3

Segment income before provision for taxes (in millions):

	Year Ended December 31,		
	2007	2006	2005
Advanced Ceramic Operations	\$212.6	\$177.0	\$63.6
ESK Ceramics	13.4	17.3	10.2
Semicon Associates	1.1	1.6	0.9
Thermo Materials	2.3	0.9	(0.2)
Ceradyne Canada	(3.0)	(0.7)	—
Ceradyne Boron Products	0.7	—	—
Inter-segment elimination	(0.6)	(1.5)	(1.3)
Total segment income before provision for taxes	\$226.5	\$194.6	\$73.2

We categorize our products into four market applications. The table below shows the percentage contribution to our total sales to external customers of each market application in the different time periods.

	Year Ended December 31,		
	2007	2006	2005
Defense	74.0%	76.2%	65.8%
Industrial	20.1	17.0	23.2
Automotive/Diesel	4.2	5.2	8.3
Commercial	1.7	1.6	2.7
Total	100.0%	100.0%	100.0%

The principal factors contributing to our recent growth in sales are increased demand by the U.S. military for ceramic body armor that protects soldiers and our acquisition of ESK Ceramics in August 2004. The operations of ESK Ceramics have been consolidated with ours since September 1, 2004. In addition, the market for ceramic body armor increased further in 2006 with the introduction of enhanced side ballistic inserts, known as ESBI, which protect the side of the soldier's torso.

Military conflicts in Iraq and Afghanistan, as well as an increasingly unstable geopolitical climate and the heightened risk of international conflicts, have resulted in increased orders for our ceramic body armor in each year since 2001. We were awarded an Indefinite Delivery/Indefinite Quantity contract by the U.S. Army in August 2004 with an adjusted maximum value of \$747.5 million from an original estimated contract value of \$461.0 million. Through February 2008, we received sixteen delivery orders equaling the contract amount. We expect to complete the delivery of this adjusted contract amount during 2008. We have also received a number of other orders for ceramic body armor, not covered by the Indefinite Delivery/Indefinite Quantity contract, from the Army and other branches of the U.S. military. In January 2006, we received our first production order for ESBI, or side plates, which are designed to protect the side areas of a soldier's torso when used in conjunction with our ESAPI ceramic body armor plates. This delivery order, which totaled \$70.0 million, was issued to us by the U.S. Army. In June 2006, we were awarded an Indefinite Delivery/Indefinite Quantity contract by the U.S. Army with a maximum value of \$611.7 million for ESBI plates. Through February 2008, 6 delivery orders totaling approximately \$310.8 million have been issued to us under this contract. Based on our current backlog for ceramic body armor, we expect our shipments of ceramic body armor to be lower in fiscal year 2008 than in 2007. Moreover, government contracts typically may be cancelled by the government at any time without penalty. For the next several quarters, and perhaps longer, demand for ceramic body armor is likely to be the most significant factor affecting our sales.

In response to a solicitation notice from the U.S. Army regarding the next ballistic threat generation of body armor, we submitted our quotation for this procurement in February 2008. This procurement, like most government procurements for ceramic body armor, will be awarded in an open competitive bidding process. We cannot be certain when the military will make awards under this procurement, or whether or to what extent we will be one of the successful bidders.

Although we believe that demand for ceramic body armor will continue for many years, the quantity and timing of government orders depends on a number of factors outside of our control, such as the amount of U.S. defense budget appropriations and the level of international conflicts. Moreover, ceramic armor contracts generally are awarded in an open competitive bidding process. Therefore, our future level of sales of ceramic body armor will depend on the U.S. military's continued demand for these products and our ability to successfully compete for and retain this business.

In July 2007 we entered into an agreement with Ideal Innovations, Inc. and Oshkosh Truck Corporation to further develop, produce and market an armored military vehicle we call the Bull™. The Bull™ armored vehicle is intended to address the increasing need for protection from improvised explosive devices, known as IEDs, mine blasts and high-threat, explosively formed projectiles, known as EFPs, and will be built on a combat-proven Oshkosh Truck chassis. The Bull™ armored solution, conceived by Ideal Innovations in 2005 and developed with Ceradyne in 2006, has been tested by the Army Test Center, Aberdeen, Maryland, and demonstrated to be capable of protecting vehicle occupants against IED, EFP and mine blast threats. It is designed to meet current IED threats, and is intended to withstand the increasingly prevalent and higher EFP threats now faced by the U.S. military. In September 2007, in response to a solicitation notice from the U.S. military regarding Mine Resistant Ambush Protected Vehicles II Enhanced Vehicle Competitive, known as MRAP II, we, together with Ideal Innovations and Oshkosh Truck, submitted a quotation and delivered both a 6-person and a 10-person MRAP II vehicle named the Bull™, to the U.S. Army Aberdeen Test Center for further service evaluation. In December 2007, the U.S. government awarded a delivery order totaling \$18.1 million to Ideal Innovations, Ceradyne and Oshkosh Truck for several 6-person versions and targets of the Bull™ armored vehicle to be used for further government testing. Ideal Innovations is the prime contractor and we are a sub-contractor to Ideal Innovations. Whether we receive additional orders for the Bull™ armored vehicle will depend upon the success of these tests, the U.S. military's need and funding for MRAP II armored

vehicles, the results of testing of a competitor's MRAP II armored vehicle, and whether our pricing for the Bull™ armored vehicle is competitive.

Ceradyne's design and production contribution to the Bull™ armored vehicle program is based on our experience and expertise learned over many years in developing ceramic armor systems for military helicopters, ground-based vehicles and boats. Due to the ballistic threat level that MRAP II armored vehicles are required to meet, the current design of the Bull™ armored vehicle does not include any ceramic armor. Although we are engaged in development of ceramic armor systems to use on future versions of the Bull™ armored vehicle, we do not know when or if a ceramic armor solution will be available or whether it would be acceptable to the U.S. military.

Our ESK Ceramics subsidiary produces boron carbide powder, which serves as a starter ceramic powder in the manufacture of our lightweight ceramic body armor. Owning this source of our principal raw material, together with the recent expansion of our manufacturing capacity for ceramic armor at our new Lexington, Kentucky plant and in our Irvine, California facility, should allow us to fulfill current and anticipated demand for our ceramic body armor.

Our order backlog was \$238.9 million as of December 31, 2007 and \$344.3 million as of December 31, 2006. Orders for ceramic armor represented approximately \$179.5 million, or 75.1% of the total backlog as of December 31, 2007 and \$285.5 million, or 82.9% of the total backlog as of December 31, 2006. We expect that substantially all of our order backlog as of December 31, 2007 will be shipped during 2008.

Our sales to customers located outside of the United States have varied in recent years, representing \$136.2 million, or 18.0% of net sales in 2007, \$105.7 million, or 15.9% during 2006 and \$96.1 million, or 26.1% in 2005. We currently have sales offices in Germany, China, England and Canada as well as commissioned independent sales representatives in other parts of Europe and Asia. Of our sales to customers located outside the United States, 31.2% were denominated in U.S. dollars during 2007.

Net Sales. Our net sales consist primarily of revenues from the sale of products, which we recognize when an agreement of sale exists, product delivery and acceptance has occurred, and collection is reasonably assured.

Cost of Product Sales. Our cost of product sales includes the cost of materials, direct labor expenses and manufacturing overhead expenses. Our business requires us to maintain a relatively high fixed manufacturing overhead. As a result, our gross profit, in absolute dollars and as a percentage of net sales, is greatly impacted by our sales volume and the corresponding absorption of fixed manufacturing overhead expenses. Additionally, because many of our products are customized, we are frequently required to devote resources to sustaining engineering expenses, which we also include in cost of product sales.

The cost of electricity comprises a significant portion of our cost of product sales. In 2004, we began expanding our high-energy utilization silicon nitride manufacturing operations at our new facility in Lexington, Kentucky, where costs, particularly for electricity and occupancy, are lower than in California. We have increased our manufacturing capacity for the production of body armor plates by adding three hot press lines at this new facility. We chose this facility for the location of the hot press expansion for the same reasons: lower cost of electricity and occupancy. The cost of electricity for our manufacturing operations in the United States and Europe was approximately \$13.5 million, or 3.0% as a percentage of cost of product sales in 2007, approximately \$11.1 million, or 2.8% as a percentage of cost of product sales in 2006, and approximately \$8.4 million, or 3.0% as a percentage of cost of product sales in 2005.

Selling Expenses. Our selling expenses consist primarily of salaries and benefits for direct sales and marketing employees, commissions for direct sales employees and for independent sales representatives, trade show expenses, rent for our sales offices, product literature, and travel and entertainment expenses.

General and Administrative Expenses. Our general and administrative expenses consist primarily of employee salaries and benefits, employee bonuses, which are computed quarterly and accrued in the quarter earned, professional service fees, rent for facilities and expenses for information technology.

Research and Development Expenses. Our research and development expenses consist primarily of employee salaries and benefits, materials and supplies related to ongoing application engineering in response to customer requirements, and the research and development of new materials technology and products. These costs are expensed as incurred.

Review of Historical Stock Option Grant Procedures

In July 2006, the Company voluntarily initiated a review of its historical stock option grant practices and related accounting treatment. The review was conducted by a Special Committee comprised of three independent members of the Company's Board of Directors, with the assistance of independent legal counsel and forensic accounting experts. The scope of the Special Committee's review included all stock options granted by the Company from January 1997 through September 2003. The Special Committee has completed its review.

Until September 2003, stock option grants generally were approved by unanimous written consents signed by the members of the Stock Option Committee of the Board of Directors. Throughout this period, the Stock Option Committee consisted of the CEO and one other non-management Director. The date specified as the grant date in each unanimous written consent was used (i) to determine the exercise price of the options and (ii) as the accounting measurement date.

The review found that from January 1997 through September 2003, the date selected by management as the grant date and accounting measurement date was the date specified in the unanimous written consent, but that, in all but one case, the unanimous written consents were not prepared, approved or executed by the Company's Stock Option Committee until a later date. There were a total of 23 grant dates from January 1997 through September 2003. The Company's CEO was responsible for selecting the grant dates and followed a consistent practice of seeking low grant prices and he was unaware of the accounting implications of the method he used. Therefore, the use of the date specified in the unanimous written consent as the accounting measurement date was incorrect in all but one case. The proper accounting measurement date was the date the unanimous written consent was signed by the members of the Stock Option Committee.

Based upon information gathered during the review by independent legal counsel, the Special Committee and the Board of Directors have concluded that, while the Company applied an option price date selection practice that resulted in the use of incorrect accounting measurement dates for options granted between January 1997 and September 2003, the accounting errors resulting from the use of incorrect measurement dates were not the product of any deliberate or intentional misconduct by the Company or its executives, staff or Board of Directors. However, as a result of using revised measurement dates for options granted from January 1997 through September 2003, the Company recorded a charge in the second quarter ended June 30, 2006 of \$3.4 million (\$2.3 million after income taxes) pertaining to the years ended December 31, 1997 to 2005 and the six months ended June 30, 2006 (the "Stock-Based Charge"). The Stock-Based Charge was included as a component of general and administrative expenses in the consolidated statements of income as this is where the affected individual's normal compensation costs are recorded. The Stock-Based Charge includes non-cash compensation expense of \$2.2 million (\$1.4 million after income taxes) primarily related to stock option grants made during the period from January 1997 through September 2003 that should have been measured as compensation cost at the actual stock option grant dates, and subsequently amortized to expense over the vesting period for each stock option grant. The Stock-Based Charge also includes \$1.2 million (\$0.9 million after income taxes) of estimated additional employment and other taxes that are expected to become payable.

From September 2003 to February 2005, all stock option grants were approved at meetings held by the Stock Option Committee, and, since February 2005, all stock option grants have been approved at meetings held by the Compensation Committee of the Board of Directors. The dates of these meetings have been used correctly as the accounting measurement date for all stock options granted since September 2003.

Had this estimated Stock-Based Charge been reflected, as and when incurred, in the Company's results of operations for prior years, the impact on net income for Ceradyne's fiscal years ended December 31 would have been a reduction of \$21,000 in 1997, a reduction of \$45,000 in 1998, a reduction of \$47,000 in 1999, a

reduction of \$104,000 in 2000, a reduction of \$269,000 in 2001, a reduction of \$74,000 in 2002, a reduction of \$347,000 in 2003, a reduction of \$611,000 in 2004, and a reduction of \$324,000 in 2005. As of December 31, 2006, the total remaining incremental stock-based compensation charge related to these stock option grants that are expected to vest in future periods with a revised accounting measurement date is immaterial. There was no impact on revenue or net cash provided by operating activities as a result of the estimated compensation charge.

The Company does not believe that a restatement of its prior-period financial statements is required for the Stock-Based Charge. Based on the materiality guidelines contained in SEC Staff Accounting Bulletin No. 99, Materiality (SAB 99), the Company believes that the Stock-Based Charge is not material to any of the individual prior periods affected and the aggregate Stock-Based Charge is not material to the results for the year ended December 31, 2006.

Prior to December 31, 2006, the current members of Ceradyne's Board of Directors, all current executive officers and all other employees of the Company amended all unexercised stock options they held which had an exercise price that is less than the price of the Company's common stock on the actual date of grant, by increasing the exercise price to an amount equal to the closing price of the common stock as of the actual grant date. The Company has and will continue to reimburse all non-executive officer employees for the increase in the exercise price for the modified options as they vest. Such reimbursement has and will not be material.

Results of Operations

The following table sets forth certain income and expense items from our financial statements for the years ended December 31, 2007, 2006 and 2005, expressed as a percentage of net sales.

	<u>Year Ended December 31,</u>		
	<u>2007</u>	<u>2006</u>	<u>2005</u>
Net sales	100.0%	100.0%	100.0%
Cost of product sales	<u>59.6</u>	<u>60.6</u>	<u>64.4</u>
Gross profit	<u>40.4</u>	<u>39.4</u>	<u>35.6</u>
Operating expenses:			
Selling	3.6	3.5	5.6
General and administration	5.4	5.3	5.7
Research and development	<u>2.3</u>	<u>1.5</u>	<u>2.1</u>
Income from operations	29.1	29.1	22.2
Other income (expense)	<u>0.8</u>	<u>0.3</u>	<u>(2.3)</u>
Income before provision for income taxes	<u>29.9</u>	<u>29.4</u>	<u>19.9</u>
Net income	<u>19.1%</u>	<u>19.4%</u>	<u>12.7%</u>

Year Ended December 31, 2007 Compared to Year Ended December 31, 2006

Net Sales. Our net sales for the year ended December 31, 2007 were \$756.8 million, an increase of \$93.9 million, or 14.2%, from \$662.9 million in the corresponding prior year period.

Our Advanced Ceramic Operations division had net sales for the year ended December 31, 2007 of \$587.3 million, an increase of \$58.6 million, or 11.1% from the \$528.7 million in the prior year. The primary reason for this improvement was the shipment of \$551.3 million of ceramic body and other armor components for defense customers, an increase of \$63.1 million, or 12.9% from the \$488.2 million of net sales in the prior year due to increased demand from the U.S. Department of Defense. Net sales for our automotive/diesel component product line, including cam rollers, were \$11.0 million, a decrease of \$6.0 million, or 35.6%, from the \$17.0 million in the prior year. The primary reasons for this decrease were that our customers produced less heavy-duty diesel truck engines in 2007 and two of our customers replaced some of our ceramic cam

rollers with cheaper steel products. Net sales of our orthodontic brackets product line were \$10.6 million, an increase of \$229,000, or 2.2%, from the \$10.4 million in the prior year.

Our ESK Ceramics subsidiary had net sales for the year ended December 31, 2007 of \$160.6 million, an increase of \$12.4 million, or 8.4% from the \$148.2 million in the prior year. Approximately \$7.9 million of this increase is attributable to a higher value of the Euro versus the U.S. dollar in 2007 compared to 2006. Sales of industrial products for the year ended December 31, 2007 were \$92.6 million, an increase of \$14.0 million, or 17.9% from the \$78.6 million in the prior year. This increase was the result of a higher demand for fluid handling and industrial wear parts. Sales of automotive/diesel products for the year ended December 31, 2007 were \$20.7 million, an increase of \$3.4 million, or 20.0% from the \$17.3 million in the prior year. This was caused by sales to new original equipment manufacturer (OEM) customers in 2007. Sales of defense products for the year ended December 31, 2007 were \$45.2 million, a decrease of \$7.1 million, or 13.5% from the \$52.3 million in the prior year. Included in sales of defense products for the year ended December 31, 2007 were inter-segment sales of \$40.7 million compared to \$40.4 million in the prior year. The decrease was due to a decrease of \$7.4 million in sales of boron carbide powder to third parties in the defense industry for the year ended December 31, 2007, partially offset by an increase of \$300,000 in sales of boron carbide powder to our Advanced Ceramic Operations division. Third parties purchased less boron carbide powder in 2007 because their sales of ceramic body armor declined.

Our Semicon Associates division had net sales for the year ended December 31, 2007 of \$8.0 million, a decrease of \$1.1 million or 12.1% from the \$9.1 million in the prior year. The decrease in sales reflects lower shipments of microwave and laser cathodes of \$0.7 million and \$300,000 of magnets in 2007 when compared to 2006.

Our Thermo Materials division had net sales for the year ended December 31, 2007 of \$32.0 million, an increase of \$17.0 million, or 113.2%, from the \$15.0 million in the prior year. The increase was due to an increase of \$4.7 million in sales of crucibles used in the manufacture of photovoltaic cells for the solar energy markets. Of this increase, \$2.1 million was from sales of crucibles manufactured by our new crucible operation in China to customers located in China. Also contributing \$12.1 million of the increase in sales was the consolidation of our acquisition, Minco, Inc., as of July 10, 2007. Offsetting these increases were a decline in sales to the defense industry and a reduction in sales of ceramic rollers to the glass industry.

Our Ceradyne Canada subsidiary, which commenced operations in July 2006, had net sales for the year ended December 31, 2007 of \$3.9 million, an increase of \$1.5 million, or 62.8% from the \$2.4 million in the prior year. The increase was due to a full year of operations in 2007 compared to only six months in 2006, and an increase in sales of metal matrix composite products.

Our Ceradyne Boron subsidiary, which we acquired on August 31, 2007, had net sales for the four month period ended December 31, 2007 of \$7.8 million.

Gross Profit. Our gross profit was \$306.0 million for the year ended December 31, 2007, an increase of \$45.1 million, or 17.3% from \$260.9 million in the prior year. As a percentage of net sales, gross profit was 40.4% for the year ended December 31, 2007, compared to 39.4% for the prior year. The increase in gross profit as a percentage of net sales in the year ended December 31, 2007 was the result of increased sales, particularly of body armor, improved sales mix and higher operating leverage. The increase in gross profit was primarily caused by the increase in body armor sales and the inclusion of our acquisitions during 2007 of Minco, Inc. and Ceradyne Boron Products in our consolidated results of operations.

Our Advanced Ceramic Operations division posted gross profit of \$247.8 million for the year ended December 31, 2007, an increase of \$38.1 million, or 18.2% from \$209.7 million in the prior year. As a percentage of net sales, gross profit was 42.2% for the year ended December 31, 2007, compared to 39.7% for the prior year. The primary reasons for the increase in gross profit and gross profit as a percentage of net sales were increased sales of body armor, improved sales mix and higher operating leverage.

Our ESK Ceramics subsidiary had a gross profit of \$48.4 million, or 30.1% of net sales, for the year ended December 31, 2007, compared to gross profit of \$47.7 million, or 32.2% of net sales, for the year ended December 31, 2006. The decrease in gross profit as a percentage of net sales in the year ended December 31,

2007 was the result of increased labor and electricity expenses, continued price reductions in our evaporation boat business due to competitive forces and a reduction in higher margin armor sales to external customers.

Our Semicon Associates division had gross profit of \$1.9 million for the year ended December 31, 2007, a decrease of \$0.6 million, or 23.9% from \$2.5 million in the prior year. As a percentage of net sales, gross profit was 24.0% for the year ended December 31, 2007, compared to 27.8% for the prior year. The decrease in gross profit and in gross profit as a percentage of net sales in the year ended December 31, 2007 were due primarily to sales returns and losses in our magnet business and lower sales of microwave and laser cathodes resulting in higher per unit manufacturing expenses.

Our Thermo Materials division had gross profit of \$7.7 million for the year ended December 31, 2007, an increase of \$4.5 million or 141.5% compared to \$3.2 million in the prior year. As a percentage of net sales, gross profit was 24.8% for the year ended December 31, 2007, compared to 21.1% for the prior year. The improvements in gross profit and gross profit as a percentage of sales were primarily due to lower sales of fused silica and casting product lines which have lower gross margins and an increase in the sales of crucibles which have higher gross margins. Also contributing \$2.3 million of the increase in gross profit was the consolidation of our new acquisition, Minco, Inc., as of July 10, 2007.

Our Ceradyne Canada subsidiary, which commenced operations in July 2006, had a gross loss for the year ended December 31, 2007 of \$1.9 million, an increase in the gross loss of \$1.3 million, or 226.6% from the \$0.6 million gross loss in the prior year. The increase in the gross loss was caused by the continuation of start up expenses and higher scrap rates.

Our Ceradyne Boron subsidiary, which we acquired on August 31, 2007, contributed \$2.9 million of gross profit for the four month period ended December 31, 2007.

Selling Expenses. Our selling expenses were \$26.9 million for the year ended December 31, 2007, an increase of \$4.0 million, or 17.4%, from \$22.9 million in the prior year. Selling expenses, as a percentage of net sales, increased from 3.5% for the year ended December 31, 2006 to 3.6% of net sales for the year ended December 31, 2007. The increase in selling expenses as a percentage of net sales was due to higher personnel expenses that could not be offset by price increases to customers. Increases in the number of employees and related personnel expenses and an additional \$1.2 million of selling expenses from the consolidations of our acquisitions of Minco, Inc. as of July 10, 2007 and Ceradyne Boron Products as of September 1, 2007 primarily accounted for the increase in selling expenses for the year ended December 31, 2007.

General and Administrative Expenses. Our general and administrative expenses for the year ended December 31, 2007 were \$40.8 million, an increase of \$5.5 million, or 15.6% from \$35.3 million in the year ended December 31, 2006. General and administrative expenses, as a percentage of net sales, increased from 5.3% for the year ended December 31, 2006 to 5.4% of net sales for the year ended December 31, 2007. Contributing \$3.1 million to the increase in general and administrative expenses for the year ended December 31, 2007 was the consolidation of our 2007 acquisitions of Minco, Inc. and Ceradyne Boron Products. Also contributing to the increase in general and administrative expenses for the year ended December 31, 2007 were increases in the number of employees and related personnel expenses, including increased bonus accruals as a result of the Company's higher operating profits. The comparison to the prior year was favorably impacted by a non-cash charge of \$2.2 million in the second quarter of 2006 based on the results of our Special Committee's review of our historical stock option practices, including our underlying option grant documentation and procedures, as described in more detail above under the caption "Overview — Review of Historical Stock Option Grant Procedures," and a related charge for payroll tax and penalties of \$1.2 million.

Research and Development Expenses. Our research and development expenses for the year ended December 31, 2007 were \$17.6 million, an increase of \$7.7 million, or 77.1%, from \$9.9 million in the prior year. Research and development expenses, as a percentage of net sales, increased from 1.5% for the year ended December 31, 2006 to 2.3% of net sales for the year ended December 31, 2007. The primary reason for these increases were development of next generation body armor products and the continuing development of combat vehicle armor.

Other Income (Expense). Our net other income for the year ended December 31, 2007 was \$5.8 million, compared to net other income of \$1.8 million in the prior year. The primary reason for the increase was an increase in interest income received from investing higher cash balances in short-term marketable securities. Offsetting this was a charge of \$2.1 million for impairment due to the other than temporary reduction in the value of our investments in auction rate securities. Interest expense was \$4.2 million in the year ended December 31, 2007, compared to \$4.1 million in the prior year.

Income before Provision for Income Taxes. Our income before provision for income taxes for the year ended December 31, 2007 was \$226.5 million, an increase of \$31.9 million or 16.4% from the \$194.6 million in the prior year.

Our Advanced Ceramic Operations division's income before provision for income taxes for the year ended December 31, 2007 was \$212.7 million, an increase of \$35.7 million or 20.1%, from \$177.0 million in the prior year. The increase in income before provision for income taxes for the year ended December 31, 2007 was a result of higher sales of body armor and an increase in gross margins as a result of improved sales mix and higher operating leverage.

Our ESK Ceramics subsidiary's income before provision for income taxes for the year ended December 31, 2007 was \$13.4 million, a decrease of \$3.9 million, or 22.7% from \$17.3 million in the prior year. The decrease in income before provision for income taxes for the year ended December 31, 2007 was the result of increased labor and electricity expenses; higher selling expenses due to increases in the number of employees and related personnel expenses, higher research and development expenses because of the development of next generation ceramic powders for body armor products, and the negative impact of the exchange rate of the Euro when compared to the U.S. dollar.

Our Semicon Associates division's income before provision for income taxes for the year ended December 31, 2007 was \$1.1 million, a decrease of \$449,000, or 28.4%, from \$1.6 million in the prior year. The decrease in income before provision for income taxes for the year ended December 31, 2007 was a result of lower sales of our microwave and laser cathodes products resulting in higher per unit manufacturing expenses, and sales returns and losses in our magnet business.

Our Thermo Materials division's income before provision for income taxes for the year ended December 31, 2007 was \$2.3 million, an increase of \$1.4 million, or 161.5%, from \$0.9 million in the prior year. The increase in income before provision for income taxes for the year ended December 31, 2007 was primarily due to a sales mix change due to lower sales of fused silica and casting product lines which have lower gross margins and an increase in the sales of crucibles which have higher gross margins. Also contributing to the increase in income before provision for income taxes for the year ended December 31, 2007 was \$166,000 of operating profit from our new acquisition, Minco, Inc.

Our Ceradyne Canada subsidiary's loss before provision for income taxes for the year ended December 31, 2007 was \$3.0 million, an increase of \$2.4 million, or 347.2%, in from \$0.7 million in the prior year. The increase in the loss before provision for income taxes for the year ended December 31, 2007 was caused by the continuation of start up expenses, higher scrap rates and lower sales resulting in higher per unit expenses.

Our Ceradyne Boron Product subsidiary's income before provision for income taxes for the year ended December 31, 2007 was \$0.7 million.

Income Taxes. Our provision for income taxes for the year ended December 31, 2007 was \$82.3 million, an increase of \$16.1 million, or 24.4% from the \$66.2 million in the prior year. The effective income tax rate for the year ended December 31, 2007 was 36.3% compared to 34.0% in the corresponding prior year period. The increase in the effective tax rate results from higher state tax rates due to apportionment of more sales inside of California and decreases in extraterritorial income related deductions. These increases to the effective tax rate were partially offset by an increase in the manufacturing deduction.

Year Ended December 31, 2006 Compared to Year Ended December 31, 2005

Net Sales. Our net sales for the year ended December 31, 2006 were \$662.9 million, an increase of \$294.6 million, or 80.0%, from \$368.3 million in the corresponding prior year period.

Our Advanced Ceramic Operations division had net sales for the year ended December 31, 2006 of \$528.7 million, an increase of \$285.9 million, or 117.7% from the \$242.8 million in the prior year. The primary reason for this improvement was the shipment of \$488.2 million of ceramic body and other armor components for defense customers, an increase of \$281.1 million, or 135.7% from the \$207.1 million of net sales in the prior year due to increased demand from the U.S. Department of Defense. Net sales for our automotive/diesel component product line, including cam rollers, were \$17.0 million, an increase of \$0.7 million, or 4.3%, from the \$16.3 million in the prior year. The primary reason for this increase is that our customers produced more heavy-duty diesel truck engines due to forward buying in anticipation of increased emission standards that became effective in 2007. Net sales of our orthodontic brackets product line were \$10.4 million, an increase of \$0.6 million, or 5.5%, from the \$9.8 million in the prior year. This was the result of a more aggressive sales and marketing plan by our customer.

Our ESK Ceramics subsidiary had net sales for the year ended December 31, 2006 of \$148.2 million, an increase of \$25.0 million, or 20.3% from the \$123.2 million in the prior year. Approximately \$1.0 million of this increase is attributable to a higher value of the Euro versus the U.S. dollar in 2006 compared to 2005. Sales of industrial products for the year ended December 31, 2006 were \$78.6 million, an increase of \$13.4 million, or 20.5% from the \$65.2 million in the prior year. This increase was the result of a higher demand for fluid handling and industrial wear parts. Sales of automotive/diesel products for the year ended December 31, 2006 were \$17.3 million, an increase of \$3.2 million, or 22.5% from the \$14.1 million in the prior year. Sales of defense products for the year ended December 31, 2006 were \$52.3 million, an increase of \$8.4 million, or 19.2% from the \$43.9 million in the prior year. Included in sales of defense products for the year ended December 31, 2006 were inter-segment sales of \$40.4 million compared to \$17.4 million in the prior year. The increase was due to an increase in demand of boron carbide at our Advanced Ceramic Operations division which was offset by a decrease of \$14.6 million in sales to third parties in the defense industry for the year ended December 31, 2006. This decrease was due to a reduction in demand for boron carbide from competitors of our Advanced Ceramic Operations division.

Our Semicon Associates division had net sales for the year ended December 31, 2006 of \$9.1 million, an increase of \$1.7 million or 21.8% from the \$7.4 million in the prior year. The increase in sales reflects higher shipments of microwave and laser cathodes in 2006 when compared to 2005.

Our Thermo Materials division had net sales for the year ended December 31, 2006 of \$15.0 million, an increase of \$2.8 million, or 23.4%, from the \$12.2 million in the prior year. The increase was due to an increase in sales of crucibles used in the manufacture of photovoltaic cells for the solar energy markets and increased sales of components for defense applications.

Our Ceradyne Canada subsidiary, which commenced operations in July 2006, had net sales for the year ended December 31, 2006 of \$2.4 million.

Gross Profit. Our gross profit was \$260.9 million for the year ended December 31, 2006, an increase of \$129.8 million, or 98.9% from \$131.1 million in the prior year. As a percentage of net sales, gross profit was 39.4% for the year ended December 31, 2006, compared to 35.6% for the prior year. The increase in gross profit as a percentage of net sales in the year ended December 31, 2006 was the result of increased sales, particularly in sales of body armor, improved sales mix and higher operating leverage. In January 2005, we commenced operations of our Lexington, Kentucky hot press facility where we produce ceramic armor plates. During the year ended December 31, 2005, we incurred start up and training expenses at this new facility that were significantly reduced during the year ended December 31, 2006. The reduction of these expenses caused gross profit to increase.

Our Advanced Ceramic Operations division posted gross profit of \$209.7 million for the year ended December 31, 2006, an increase of \$118.4 million, or 129.7% from \$91.3 million in the prior year. As a percentage of net sales, gross profit was 39.7% for the year ended December 31, 2006, compared to 37.6% for

the prior year. The reasons for the increase in gross profit and gross profit as a percentage of net sales were consistent with those reasons described in the preceding paragraph.

Our ESK Ceramics subsidiary had a gross profit of \$47.7 million, equal to 32.2% of net sales, for the year ended December 31, 2006, compared to gross profit \$37.6 million, or 30.5% of as a percentage of net sales, for the year ended December 31, 2005. The increase in gross profit as a percentage of net sales in the year ended December 31, 2006 was the result of increased sales, improved sales mix, higher operating leverage, as well as increased sales by our Advanced Ceramics Operations division of products containing boron carbide purchased from ESK Ceramics.

Our Semicon Associates division had gross profit of \$2.5 million for the year ended December 31, 2006, an increase of \$0.7 million, or 42.9% from \$1.8 million in the prior year. As a percentage of net sales, gross profit was 27.8% for the year ended December 31, 2006, compared to 23.6% for the prior year. The increase in gross profit and in gross profit as a percentage of net sales in the year ended December 31, 2006 was due primarily to an improved sales mix caused by higher sales of microwave and laser cathodes.

Our Thermo Materials division had gross profit of \$3.2 million for the year ended December 31, 2006, an increase of \$1.4 million or 74.3% compared to \$1.8 million in the prior year. As a percentage of net sales, gross profit was 21.1% for the year ended December 31, 2006, compared to 15.0% for the prior year. The improvements in gross profit and gross profit as a percentage of sales were primarily due to lower sales of fused silica and casting product lines which have lower gross margins and an increase in the sales of crucibles which have higher gross margins.

Our Ceradyne Canada subsidiary, which commenced operations in July 2006, had gross loss for the year ended December 31, 2006 of \$0.6 million. The loss was caused by operational start up expenses.

Selling Expenses. Our selling expenses were \$22.9 million for the year ended December 31, 2006, an increase of \$2.2 million, or 10.8%, from \$20.7 million in the prior year. Selling expenses, as a percentage of net sales, decreased from 5.6% for the year ended December 31, 2005 to 3.5% of net sales for the year ended December 31, 2006. The decrease in selling expenses as a percentage of net sales was due to higher armor sales that did not require a proportional increase in selling expenses. Increases in the number of employees and related personnel expenses primarily accounted for the increase in selling expenses for the year ended December 31, 2006.

General and Administrative Expenses. Our general and administrative expenses for the year ended December 31, 2006 were \$35.3 million, an increase of \$14.3 million, or 67.9% from \$21.0 million in the year ended December 31, 2005. General and administrative expenses, as a percentage of net sales, decreased from 5.7% for the year ended December 31, 2005 to 5.3% of net sales for the year ended December 31, 2006. Contributing to the increase in general and administrative expenses for the year ended December 31, 2006 was a non-cash charge of \$2.2 million in the second quarter based on the results of our Special Committee's review of our historical stock option practices, including our underlying option grant documentation and procedures, as described in more detail above under the caption "Overview — Review of Historical Stock Option Grant Procedures," and a related charge for payroll tax and penalties of \$1.2 million. Increases in the number of employees and related personnel expenses, including increased bonus accruals as a result of the Company's higher operating profits, accounted for the remaining increase in general and administrative expenses.

Research and Development Expenses. Our research and development expenses for the year ended December 31, 2006 were \$9.9 million, an increase of \$2.1 million, or 27.0%, from \$7.8 million in the prior year. Research and development expenses, as a percentage of net sales, decreased from 2.1% for the year ended December 31, 2005 to 1.5% of net sales for the year ended December 31, 2006. The primary reason for the decrease in research and development expenses as a percentage of net sales was higher armor sales that did not require a proportional increase in research and development expenses. For the year ended December 31, 2006, expenses for the development of next generation body armor products and the continuing development of vehicle armor primarily accounted for the increase in research and development expenses.

Other Income (Expense). Our net other income for the year ended December 31, 2006 was \$1.8 million, compared to net other expense of \$8.4 million in the prior year. The primary reason for the change was an increase in interest income received from investing higher cash balances in short-term marketable securities. Interest expense was \$4.1 million in the year ended December 31, 2006, compared to \$9.3 million in the prior year. The decrease in interest expense was due to the repayment in December 2005 of our credit facility consisting of a term loan and line of credit, which had a higher interest rate than the convertible debt that we issued in December 2005 to replace it. Included in interest expense for the year ended December 31, 2005 was approximately \$2.6 million for the write-off of unamortized debt issuance costs as we terminated our credit facility.

Income before Provision for Income Taxes. Our income before provision for income taxes for the year ended December 31, 2006 was \$194.6 million, an increase of \$121.4 million or 165.7% from the \$73.2 million in the prior year.

Our Advanced Ceramic Operations division's income before provision for income taxes for the year ended December 31, 2006 was \$177.0 million, an increase of \$113.3 million or 178.1%, from \$63.7 million in the prior year. The increase in income before provision for income taxes for the year ended December 31, 2006 was a result of higher sales of body armor and a reduction of start up and training expenses in our Lexington, Kentucky hot press facility compared to the prior year.

Our ESK Ceramics subsidiary's income before provision for income taxes for the year ended December 31, 2006 was \$17.3 million, an increase of \$7.1 million, or 69.3% from \$10.2 million in the prior year. The increase in gross profit and gross profit as a percentage of sales was a result of an improved sales mix, as well as increased sales by our Advanced Ceramics Operations division of products containing boron carbide purchased from ESK Ceramics.

Our Semicon Associates division's income before provision for income taxes for the year ended December 31, 2006 was \$1.6 million, an increase of \$0.7 million, or 76.5%, from \$0.9 million in the prior year. The increase in income before provision for income taxes for the year ended December 31, 2006 was a result of higher sales of our microwave and laser cathodes products and increased manufacturing operating leverage while other operating expenses remained relatively constant.

Our Thermo Materials division's income before provision for income taxes for the year ended December 31, 2006 was \$0.9 million, an increase of \$1.1 million from a loss of \$209,000 before provision for income taxes in the prior year. The increase in income before provision for income taxes for the year ended December 31, 2006 was primarily due to an improved sales mix caused by higher sales of crucibles and increasing defense revenues.

Our Ceradyne Canada subsidiary had loss before provision for income taxes for the year ended December 31, 2006 of \$0.7 million. The loss was caused by operational start up expenses.

Income Taxes. Our provision for income taxes for the year ended December 31, 2006 was \$66.2 million, an increase of \$39.7 million, or 150.1% from the \$26.5 million in the prior year. The effective income tax rate for the year ended December 31, 2006 was 34.0% compared to 36.1% in the corresponding prior year period. The decrease in the effective tax rate results from a lower state tax rate due to apportionment of sales outside of California, increases in domestic production activities which generated larger manufacturing deductions and increases in extraterritorial income related deductions.

Liquidity and Capital Resources

We generally have met our operating and capital requirements with cash flow from operating activities, borrowings under our credit facility, and proceeds from the sale of shares of our common stock.

Our net cash position increased by \$141.6 million during the year ended December 31, 2007, compared to a \$78.0 million decrease during the year ended December 31, 2006. For the year ended December 31, 2007, cash flow provided by operating activities amounted to \$153.6 million. The primary factors contributing to cash flow from operating activities in the year ended December 31, 2007, were net income of \$144.3 million,

and adjustments of non-cash amounts related to depreciation and amortization of \$26.8 million and stock compensation of \$2.5 million. A decrease in production tooling and prepaid expenses of \$4.8 million and increases in other liabilities and other long term liability of \$6.1 million added an aggregate of \$10.9 million to cash flow. These contributions were offset in part by deferred income taxes of \$2.3 million, increase in accounts receivable and other receivables of \$3.7 million due to higher amounts of sales over the previous year, increased levels of inventories of \$6.3 million, and decreased levels of accounts payable, accrued expenses, income tax payable and employee benefits that added an aggregate of \$18.4 million. The increase in inventory was due to the increase in sales and production to support the growth of the Advanced Ceramic Operations segment.

During the year ended December 31, 2007, we used \$20.9 million of our cash for investing activities. Uses of cash included \$42.2 million for capital expenditures, \$99.1 million in acquisition costs related to the purchases of Minco, Inc. and Ceradyne Boron Products, purchases of marketable securities of \$700.4 million and we allocated \$2.7 million of cash to a restricted status. Capital expenditures included \$7.8 million to construct a building and purchase equipment for our expansion in China for the production of ceramic crucibles used to manufacture photovoltaic solar cells and \$2.9 million for the expansion at ESK Ceramics for increased production capacity for our BORONEIGE® boron nitride product line. Proceeds from maturities and sales of marketable securities added \$823.5 million of cash flow from investing activities.

Financing activities during the year ended December 31, 2007 provided net cash of \$5.2 million. We received cash proceeds of \$401,000 relating to the issuance of common stock under our stock plan, and proceeds of \$1.3 million from issuance of stock due to exercise of stock options and the gross tax benefit of \$3.5 million due to exercise of stock options and issuance of stock upon vesting of restricted stock units. The effect of exchange rates on cash and equivalents was a positive \$3.7 million due to our investments in our German subsidiary, ESK Ceramics, and in our Chinese subsidiary, Ceradyne (Tianjin) Technical Ceramics Co., Ltd.

Our net cash position decreased by \$78.0 million during the year ended December 31, 2006, compared to an \$87.0 million increase during the year ended December 31, 2005. For the year ended December 31, 2006, cash flow provided by operating activities amounted to \$139.2 million. The primary factors contributing to cash flow from operating activities in the year ended December 31, 2006, were net income of \$128.4 million, and adjustments of non-cash amounts related to depreciation and amortization of \$18.1 million, stock compensation of \$3.9 million, and increased levels of accounts payable, accrued expenses, income tax payable, employee benefits and other liabilities that added an aggregate of \$24.7 million. These contributions were offset in part by deferred income taxes of \$4.9 million, increase in accounts receivable and other receivables of \$18.0 million due to higher amounts of sales over the previous year, increased levels of inventories, production tooling, prepaid expenses and other assets that totaled \$13.1 million. The increase in inventory and tooling were due to the increase in sales and production to support the growth of the Advanced Ceramic Operations segment.

During the year ended December 31, 2006, we used \$225.5 million of our cash for investing activities, including \$36.0 million for capital expenditures, \$6.7 million in acquisition costs related to the Boral® product line, and purchases of short term investments totaling \$673.2 million offset by proceeds from maturities and sales of marketable securities of \$490.5 million. Capital expenditures included \$8.0 million to purchase a building and equipment in Canada to enable us to enter into the manufacture and marketing of structural neutron absorbing materials and metal matrix composites.

Financing activities during the year ended December 31, 2006 provided net cash of \$5.8 million. We received cash proceeds of \$0.6 million relating to the issuance of common stock under our stock plan, and proceeds of \$2.3 million from issuance of stock due to exercise of stock options and the excess tax benefit of \$2.9 million due to exercise of stock options. The effect of exchange rates on cash and equivalents due to our investment in ESK Ceramics was a positive \$2.4 million.

During December 2005, we issued \$121.0 million principal amount of 2.875% senior subordinated convertible notes due December 15, 2035. Interest on the notes is payable on December 15 and June 15 of each year, commencing on June 15, 2006. The notes are convertible into 17.1032 shares of our common stock

for each \$1,000 principal amount of the notes (which represents a conversion price of approximately \$58.47 per share), subject to adjustment. The notes are convertible only under certain circumstances, including if the price of our common stock reaches, or the trading price of the notes falls below, specified thresholds, if the notes are called for redemption, if specified corporate transactions or fundamental change occur, or during the 10 trading days prior to maturity of the notes. We may redeem the notes at any time after December 20, 2010, for a price equal to 100% of the principal amount plus accrued and unpaid interest, including contingent interest (as described below), if any, up to but excluding the redemption date.

With respect to each \$1,000 principal amount of the notes surrendered for conversion, we will deliver the conversion value to holders as follows: (1) an amount in cash equal to the lesser of (a) the aggregate conversion value of the notes to be converted and (b) \$1,000, and (2) if the aggregate conversion value of the notes to be converted is greater than \$1,000, an amount in shares or cash equal to such aggregate conversion value in excess of \$1,000.

The notes contain put options, which may require us to repurchase in cash all or a portion of the notes on December 15, 2012, December 15, 2015, December 15, 2020, December 15, 2025, and December 15, 2030 at a repurchase price equal to 100% of the principal amount of the notes to be repurchased plus accrued and unpaid interest, including contingent interest (as described below), if any, to but excluding the repurchase date.

We are obligated to pay contingent interest to the holders of the notes during any six-month period from June 15 to December 14 and from December 15 to June 14, commencing with the six-month period beginning December 20, 2010 and ending on June 14, 2011, if the average trading price of the note for the five trading day period ending on the third trading day immediately preceding the first day of the relevant contingent interest period equals \$1,200 (120% of the principal amount of a note) or more. The amount of contingent interest payable per note for any relevant contingent interest period shall equal 0.25% per annum of the average trading price of a note for the five trading day period ending on the third trading day immediately preceding the first day of the relevant contingent interest period.

In December 2005, we established an unsecured \$10.0 million bank line of credit. As of December 31, 2007, there were no outstanding amounts on the line of credit. However, the available line of credit at December 31, 2007 has been reduced by outstanding letters of credit in the amount of \$1.5 million. The interest rate on the credit line is based on the LIBOR rate for a period of one month plus a margin of 0.6 percent, which equaled 5.3 percent as of December 31, 2007. There is an additional charge per quarter based on a ratio of funded debt to consolidated earnings before interest, income taxes, depreciation and amortization. For the quarter ended December 31, 2007, based on this ratio the additional charge for the unused portion of the credit line amounted to 0.2 percent of the undisbursed portion of the credit line.

Pursuant to the bank line of credit, the Company is subject to certain covenants, which include, among other things, the maintenance of specified minimum amounts of tangible net worth and quick assets to current liabilities ratio. At December 31, 2007, the Company was in compliance with these covenants.

Our cash, cash equivalents and short-term investments totaled \$187.3 million at December 31, 2007, compared to \$204.1 million at December 31, 2006. At December 31, 2007, we had working capital of \$353.9 million, compared to \$332.1 million at December 31, 2006. Our cash position includes amounts denominated in foreign currencies, and the repatriation of those cash balances from our ESK Ceramics subsidiary does not result in additional tax costs. We believe that our current cash and cash equivalents on hand and cash available from the sale of short-term investments, cash available from additional borrowings under our revolving line of credit and cash we expect to generate from operations will be sufficient to finance our anticipated capital and operating requirements for at least the next 12 months. Our anticipated capital requirements primarily relate to the expansion of our manufacturing facilities in the United States, China and Germany. We also may utilize cash, and, to the extent necessary, borrowings from time to time to acquire other businesses, technologies or product lines that complement our current products, enhance our market coverage, technical capabilities or production capacity, or offer growth opportunities. We have no present agreements for any material acquisitions.

Our material contractual obligations and commitments as of December 31, 2007 are as follows (amounts in thousand):

	Payments Due by Period				
	Total	Less than 1 Year	2-3 Years	4-5 Years	After 5 Years
Debt, principal amount	\$121,000	\$ —	\$ —	\$ —	\$121,000
Non-cancelable leases	6,314	2,370	3,726	218	—
Pension benefits	9,219	630	1,472	1,857	5,260
IT services	1,032	740	292	—	—
Cash commitments for interest expense ..	<u>97,406</u>	<u>3,479</u>	<u>6,958</u>	<u>6,958</u>	<u>80,011</u>
Total contractual obligations	<u>\$234,971</u>	<u>\$7,219</u>	<u>\$12,448</u>	<u>\$9,033</u>	<u>\$206,271</u>

As of December 31, 2007, we have \$4.6 million of uncertain tax positions. We are unable to make a reasonable estimate regarding settlement of these uncertain tax positions, and as a result, they have been excluded from the table.

Off-Balance Sheet Arrangements

The only off-balance sheet arrangement is the conversion feature of our 2.875% convertible senior subordinated notes discussed above.

Critical Accounting Policies and Estimates

Management's discussion and analysis of financial condition and results of operations, as well as disclosures included elsewhere in this report are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. Preparing these consolidated financial statements requires our management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues, expenses and related disclosure of contingencies. Management has not determined how reported amounts would differ based on the application of different accounting policies. Management has also not determined the likelihood that materially different amounts could be reported under different conditions or using different assumptions. We believe that the critical accounting policies that most impact the consolidated financial statements are as described below. A summary of our significant accounting policies is included in Note 2 to our consolidated financial statements which begin on page F-1 of this report.

The application of accounting policies requires the use of judgment and estimates. As it relates to the Company, estimates and forecasts are required to determine sales returns and reserves, rebate reserves, allowances for doubtful accounts, reserves for excess and obsolete inventory, investments in unconsolidated affiliates, workers' compensation liabilities, employee benefit related liabilities, income taxes, any temporary or other than temporary impairment of assets, forecasted transactions to be hedged, litigation reserves and contingencies.

These matters that are subject to judgments and estimation are inherently uncertain, and different amounts could be reported using different assumptions and estimates. Management uses its best estimates and judgments in determining the appropriate amount to reflect in the financial statements, using historical experience and all available information. The Company also uses outside experts where appropriate. The Company applies estimation methodologies consistently from year to year.

The Company believes the following are the critical accounting policies which could have the most significant effect on the Company's reported results and require subjective or complex judgments by management.

Sales Recognition. Sales are recorded when all of the following have occurred: an agreement of sale exists, product delivery and acceptance has occurred, and collection is reasonably assured. Management is required to make judgments about whether or not collection is reasonably assured. We reduce revenue with

reserves for sales returns. Allowances, which are recorded at the time revenue is recognized, in accordance with SFAS No. 48, "Revenue Recognition When Right of Return Exists," are based upon historical sales returns. We do not record a warranty reserve on the sale of our products. For our largest product line, body armor, all of which is sold to the U.S. government, each lot of body armor is tested at an independent laboratory and the lot cannot be released for shipment to the U.S. government until positive test results are received by both the U.S. government and us. For our non-body armor sales, we have experienced minimal claims from these types of sales. Additionally, due to the inherent nature, strength, durability and structural properties of ceramics, as well as a rigid quality control program that includes, for some of our customers, having the customer accept quality test results prior to shipment, we do not believe a warranty reserve is necessary.

Accounts Receivable. We review our trade accounts receivables and our estimates of the allowance for doubtful accounts each period. The allowance for doubtful accounts is determined by analyzing specific customer accounts and assessing the risk of uncollectibility based on insolvency, disputes or other collection issues. In addition, we routinely analyze the different aging categories and establish allowances based on the length of time receivables are past due (based on contractual terms). A write-off will occur if the settlement of the account receivable is less than the carrying amount or we ultimately determine the balance will not be collected. The amounts we will ultimately realize could differ materially from the amounts assumed in arriving at the allowance for doubtful accounts in the financial statements included in this report beginning on page F-1.

Inventories. Inventories are valued at the lower of cost (first-in, first-out) or market. The write-down of inventory for obsolete items is based on our estimate of the amount considered obsolete based on specific reviews of inventory items. In estimating the allowance, we rely on our knowledge of the industry as well as our current inventory levels. The amounts we will ultimately realize could differ from the estimated amounts. Inventory costs include the cost of material, labor and manufacturing overhead.

Accounting for Long-Lived Assets. In accordance with Statement of Financial Accounting Standards ("SFAS"), SFAS No. 144, "Accounting for the Impairment or Disposal for Long-Lived Assets" ("SFAS 144") long-lived assets and intangible assets with definite lives are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Impairment indicators include, among other conditions, cash flow deficits, historic or anticipated declines in revenue or operating profit and adverse legal or regulatory developments. If it is determined that such indicators are present and the review indicates that the assets will not be fully recoverable, based on undiscounted estimated cash flow over the remaining amortization periods, their carrying values are reduced to estimated fair market value. Estimated fair market value is determined primarily using the anticipated cash flow discounted at a rate commensurate with the risk involved. For the purposes of identifying and measuring impairment, long-lived assets are grouped with other assets and liabilities at the lowest level for which identifiable cash flow are largely independent of the cash flow of other assets and liabilities.

Goodwill and Intangible Assets. In accordance with SFAS No. 142, "Goodwill and Other Intangible Assets" ("SFAS 142") goodwill is not being amortized, but instead is subject to an annual assessment of impairment by applying a fair-value based test.

The Company performs an annual impairment test for goodwill in the fourth quarter of each year. Goodwill is allocated to six reporting units, which represent the Company's operating segments. The Company's reporting units for purposes of applying the provisions of SFAS 142 are: Advanced Ceramics Operations, Semicon Associates, Thermo Materials, ESK Ceramics, Ceradyne Canada and Ceradyne Boron Products. SFAS 142 requires the Company to compare the fair value of the goodwill and indefinite lived intangible assets to the carrying amount on an annual basis to determine if there is potential impairment. If the fair value of goodwill and/or indefinite lived intangible assets is less than the carrying value, an impairment loss is recorded to the extent that the fair value of the goodwill and/or indefinite lived intangible assets is less than the carrying value. Fair value is determined based on discounted cash flows, market multiples or appraised values as appropriate. At December 31, 2007, no impairment of goodwill had occurred. Intangible assets with definite lives are amortized over their estimated useful lives based on the economic consumption method.

Pension. The Company provides pension benefits to its employees of its subsidiaries of ESK Ceramics and Ceradyne Boron Products. For the pension plans of both subsidiaries, we make several assumptions that are used in calculating the expense and liability of the plans. These key assumptions include the expected long-term rate of return on plan assets and the discount rate. In selecting the expected long-term rate of return on assets, we consider the average future rate of earnings expected on the funds invested or to be invested to provide for the benefits under the pension plans. This includes considering the plans' asset allocations and the expected returns likely to be earned over the life of this plan. The discount rate reflects the estimated rate at which an amount that is invested in a portfolio of high-quality debt instruments would provide the future cash flows necessary to pay benefits when they come due. In addition the expense and liabilities of the plan were determined using other assumptions for future experience, such as mortality rates. The actuarial assumptions used by us may differ materially from actual results due to changing market and economic conditions or longer or shorter life spans of the participants. Our actual results could differ materially from those we estimated, which could require us to record a greater amount of pension expense.

Recent Accounting Pronouncements

In December 2007, the FASB issued SFAS No. 141R, "Business Combinations" ("SFAS 141R") which establishes principles and requirements for how the acquirer of a business recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree. The statement also provides guidance for recognizing and measuring the goodwill acquired in the business combination and determines what information to disclose to enable users of the financial statement to evaluate the nature and financial effects of the business combination. SFAS 141R is effective for financial statements issued for fiscal years beginning after December 15, 2008. Accordingly, any business combinations the Company engages in will be recorded and disclosed following existing GAAP until January 1, 2009. The Company does not expect SFAS 141R will have an impact on its consolidated financial statements when effective, but the nature and magnitude of the specific effects will depend upon the nature, terms and size of the acquisitions the Company consummates after the effective date. The Company is evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

In December 2007, the FASB issued SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements, an amendment of ARB No. 51" ("SFAS 160"). SFAS 160 introduces significant changes in the accounting and reporting for business acquisitions and noncontrolling interest ("NCI") in a subsidiary. SFAS 160 also changes the accounting for and reporting for the deconsolidation of a subsidiary. Companies are required to adopt the new standard for fiscal years beginning after January 1, 2009. The Company is evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

In February 2007, the FASB issued SFAS No. 159 "Fair Value Option for Financial Assets and Financial Liabilities" ("SFAS 159") which permits entities to measure many financial instruments and certain other items at fair value. Companies are required to adopt the new standard for fiscal years beginning after November 15, 2007. The Company is evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

In September 2006, the FASB issued SFAS No. 157 "Fair Value Measurement" ("SFAS 157") which defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurement. Companies are required to adopt the new standard for fiscal years beginning after November 15, 2007. In February 2008, the FASB decided to issue a final Staff Position to allow a one-year deferral of adoption of SFAS 157 for non-financial assets and non-financial liabilities that are recognized or disclosed at fair value in the financial statements on a nonrecurring basis. The FASB also decided to amend SFAS 157 to exclude FASB Statement No. 13 and its related interpretive accounting pronouncements that address leasing, transactions. The Company is evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

In June 2007 the FASB ratified EITF No. 07-3, "Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities" ("EITF 07-3") which requires non-refundable advance payments for goods and services to be used in future research and development activities to be recorded as an asset and the payments to be expensed when the research and development activities are performed. EITF 07-3 is effective for fiscal years beginning after December 15, 2007. The Company is evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

ITEM 7A. *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

Interest Rate Risk

Our exposure to market rate risk for changes in interest rates relates primarily to our investment portfolio and our debt. We have not used derivative financial instruments in our investment portfolio. We place our investments with high-quality issuers and, by policy, limit the amount of credit exposure to any one issuer. We protect and preserve our invested funds by limiting default, market and reinvestment risk. Our investments in marketable securities consist primarily of high-grade corporate and government securities with maturities of less than two years. Investments purchased with an original maturity of three months or less are considered cash equivalents. Our long term investments at December 31, 2007 included \$38.1 million of auction rate securities net of a temporary impairment charge of \$0.8 million against other comprehensive income and an other than temporary impairment charge of \$2.1 million against current earnings. The Company's investments in auction rate securities represent interests in collateralized debt obligations supported by pools of residential and commercial mortgages or credit cards, insurance securitizations and other structured credits, including corporate bonds. These auction rate securities are intended to provide liquidity via an auction process that resets the applicable interest rate at predetermined calendar intervals, allowing investors to either roll over their holdings or gain immediate liquidity by selling such interests at par. During the second half of the year 2007, the auctions for these securities failed. As a result of current negative conditions in the global credit markets, auctions for the Company's investment in these securities have recently failed to settle on their respective settlement dates. Consequently, the investments are not currently liquid through the normal auction process and may be liquid if a buyer is found outside the auction process.

We review impairments associated with the above in accordance with Emerging Issues Task Force (EITF) 03-1 and FSP SFAS 115-1 and 124-1, "The Meaning of Other-Than-Temporary-Impairment and Its Application to Certain Investments," to determine the classification of the impairment as "temporary" or "other-than-temporary." A temporary impairment charge results in an unrealized loss being recorded in the other comprehensive income component of stockholders' equity. Such an unrealized loss does not reduce net income for the applicable accounting period because the loss is not viewed as other-than-temporary. We believe that a portion of the impairment of our auction rate securities investments is temporary and a portion is other-than-temporary.

We classify all of our investments as available-for-sale. Available-for-sale securities are carried at fair value, with unrealized gains and losses, net of tax, reported in a separate component of stockholders' equity. Average maturity of our investment portfolio is 97 days; therefore, the movement of interest rates should not have a material impact on our balance sheet or income statement.

At any time, a significant increase/decrease in interest rates will have an impact on the fair market value and interest earnings of our investment portfolio. We do not currently hedge this interest rate exposure. We have performed a sensitivity analysis as of December 31, 2007 and 2006, using a modeling technique that measures the change in the fair values arising from a hypothetical 50 basis points and 100 basis points adverse movement in the levels of interest rates across the entire yield curve, which are representative of historical movements in the Federal Funds Rate with all other variables held constant. The analysis covers our investment and is based on the weighted-average maturity of our investments as of December 31, 2007 and 2006. The sensitivity analysis indicated that a hypothetical 50 basis points adverse movement in interest rates would result in a loss in the fair values of our investment instruments of approximately \$2,500 at December 31, 2007 and approximately \$40,000 at December 31, 2006. Similarly a hypothetical 100 basis points adverse

movement in interest rates would result in a loss in the fair values of our investments of approximately \$5,000 at December 31, 2007 and approximately \$79,000 at December 31, 2006.

Actual maturities may differ from contractual maturities because the issuer of the securities may have the right to repurchase such securities. We classify short-term investments in current assets, as all such investments are available for current operations.

We are not exposed to market risks related to fluctuations in interest rates on our debt as it is fixed rate debt. Consequently, we do not utilize interest rate swaps or other types of derivative financial instruments regarding our debt.

Foreign Currency Fluctuations

We enter into foreign exchange forward contracts to reduce earnings and cash flow volatility associated with foreign exchange rate changes to allow our management team to focus its attention on its core business operations. Accordingly, we enter into contracts which change in value as foreign exchange rates change to economically offset the effect of changes in value of foreign currency assets and liabilities, commitments and anticipated foreign currency denominated sales and operating expenses. We enter into foreign exchange forward contracts in amounts between minimum and maximum anticipated foreign exchange exposures, generally for periods not to exceed one year. These derivative instruments are not designated as accounting hedges.

We measure the financial statements of our foreign subsidiaries using the local currency as the functional currency. Assets and liabilities of these subsidiaries are translated at the exchange rate on the balance sheet date. Revenues, costs and expenses are translated at the rates of exchange prevailing during the year. Translation adjustments resulting from this process are included in stockholders' equity. Gains and losses from foreign currency transactions are included in other income miscellaneous.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Consolidated Financial Statements and Supplementary Data commence at page F-1 of this report and an index thereto is included in Part IV, Item 15 of this report.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with the participation of our principal executive officer and principal financial officer, of the effectiveness of the design and operation of our disclosure controls and procedures. Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and Rule 15d-15(e) under the Securities Exchange Act of 1934) were effective.

Changes in Internal Control over Financial Reporting

Our management evaluated our internal control over financial reporting and there have been no changes during the fiscal quarter ended December 31, 2007 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed to provide reasonable assurance

regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2007. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control — Integrated Framework. Based on our assessment, we have concluded that, as of December 31, 2007, our internal control over financial reporting was effective based on those criteria.

We have excluded two of our wholly-owned subsidiaries, Minco, Inc. and Boron Products, LLC, which does business as Ceradyne Boron Products, from our assessment of internal control over financial reporting as of December 31, 2007 because we acquired both of these companies in 2007. The combined total assets of Minco, Inc. and Ceradyne Boron Products represent 13.3% of our consolidated assets as of December 31, 2007, and their combined total revenues represent 2.6% of our consolidated revenues for the year ended December 31, 2007.

Ceradyne's independent registered public accounting firm, PricewaterhouseCoopers LLP, issued a report on the effectiveness of our internal control over financial reporting as of December 31, 2007, which appears herein.

ITEM 9B. *OTHER INFORMATION*

Not applicable.

PART III

ITEM 10. *DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

Information in response to this item (except for certain information concerning executive officers included in Part I of this report) is incorporated by reference from the registrant's definitive proxy statement to be filed with the Commission within 120 days after the close of registrant's fiscal year.

ITEM 11. *EXECUTIVE COMPENSATION*

Information in response to this item is incorporated by reference from the registrant's definitive proxy statement to be filed with the Commission within 120 days after the close of registrant's fiscal year.

ITEM 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS*

Information in response to this item is incorporated by reference from the registrant's definitive proxy statement to be filed with the Commission within 120 days after the close of registrant's fiscal year.

ITEM 13. *CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE*

Information in response to this item is incorporated by reference from the registrant's definitive proxy statement to be filed with the Commission within 120 days after the close of registrant's fiscal year.

ITEM 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

Information in response to this item is incorporated by reference from the registrant's definitive proxy statement to be filed with the Commission within 120 days after the close of registrant's fiscal year.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) List of documents filed as part of this report:

Financial Statements:

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Report of Independent Registered Public Accounting Firm	F-1
Consolidated Balance Sheets at December 31, 2007 and 2006	F-2
Consolidated Statements of Income for the Years Ended December 31, 2007, 2006 and 2005	F-3
Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2007, 2006 and 2005	F-4
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Notes to Consolidated Financial Statements	F-6

(b) List of Exhibits

<u>Exhibit Number</u>	<u>Description</u>
2.1	Sale and Purchase Agreement dated June 26, 2007, among Ceradyne, Inc., Ceradyne EPB, Inc., EaglePicher Boron, LLC, EaglePicher Technology Holdings, LLC and EaglePicher Corporation. Incorporated herein by reference to Exhibit 2.1 to the Registrant's Form 10-Q Report for the quarter ended June 30, 2007.
3.1	Restated Certificate of Incorporation of Ceradyne, Inc., as filed with the Secretary of State of Delaware on May 25, 1987. Incorporated herein by reference to Exhibit 3.1 to the Registrant's Form 10-Q Report for the quarter ended June 30, 2006.
3.2	Certificate of Amendment of Restated Certificate of Incorporation of Ceradyne, Inc., as filed with the Secretary of State of Delaware on June 8, 2006. Incorporated herein by reference to Exhibit 3.2 to the Registrant's Form 10-Q Report for the quarter ended June 30, 2006.
3.3	Bylaws of Registrant.
3.4	Amendment to Bylaws of Registrant, adopted April 29, 1996.
3.5	Amendment to Bylaws of Registrant, adopted December 18, 2007.
4.1	Indenture dated December 19, 2005, between Ceradyne, Inc. and Union Bank of California, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.1 of Registrant's Form 8-K Current Report dated December 13, 2005, filed with the Commission on December 19, 2005.
4.2	First Supplemental Indenture dated December 19, 2005, between Ceradyne, Inc. and Union Bank of California, N.A., as Trustee. Incorporated herein by reference to Exhibit 4.2 of Registrant's Form 8-K Current Report dated December 13, 2005, filed with the Commission on December 19, 2005.
4.3	Form of 2.875% Senior Subordinated Convertible Note due 2035. Incorporated herein by reference to Exhibit 4.3 of Registrant's Form 8-K Current Report dated December 13, 2005, filed with the Commission on December 19, 2005.
10.1	Intentionally omitted.
10.2	Lease covering premises located at 3169-A Red Hill Avenue, Costa Mesa, California dated October 28, 1985. Incorporated herein by reference to Exhibit 10.30 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1985.
10.3	Lease dated March 31, 1986 covering premises located at 3163 Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.45 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1986.
10.4	Lease dated August 5, 1986 covering premises located at 225 Paularino Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.46 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1986.

<u>Exhibit Number</u>	<u>Description</u>
10.5	Short-form Memorandum of Lease Assignment dated December 15, 1986, and Lease dated June 23, 1980, covering premises located at 3449 Church Street, Scottdale, Georgia. Incorporated herein by reference to Exhibit 10.47 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1986.
10.6	Intentionally omitted.
10.7*	Ceradyne, Inc. 1994 Stock Incentive Plan. Incorporated herein by reference to Exhibit 10.31 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1994.
10.8*	Amendment No. 1 to the Ceradyne, Inc. 1994 Stock Incentive Plan. Incorporated herein by reference to Exhibit 4.2 to Registrant's Registration Statement on Form S-8 (File No. 33-61675).
10.9	Intentionally omitted.
10.10	Intentionally omitted.
10.11	Amendment No. 2, dated June 5, 1995, to Lease covering premises located at 3169-A Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.33 to the Registrant's Registration Statement on Form S-1 (File No. 33-62345).
10.12	Amendment No. 2, dated June 5, 1995, to Lease dated March 31, 1986 covering premises located at 3163 Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.34 to the Registrant's Registration Statement on Form S-1 (File No. 33-62345).
10.13	Amendment No. 2, dated June 5, 1995, to Lease dated August 5, 1986 covering premises located at 225 Paularino Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.35 to the Registrant's Registration Statement on Form S-1 (File No. 33-62345).
10.14*	Amendment No. 2 to the Ceradyne, Inc. 1994 Stock Incentive Plan. Incorporated herein by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1996.
10.15*	Amendment No. 3 to the Ceradyne, Inc. 1994 Stock Incentive Plan. Incorporated herein by reference to Exhibit 4.4 to Registrant's Registration Statement on Form S-8 (File No. 333-31679).
10.16*	Amendment No. 4 to the Ceradyne, Inc. 1994 Stock Incentive Plan. Incorporated herein by reference to Exhibit 10.29 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 1998.
10.17*	Amendment No. 5 to the Ceradyne, Inc. 1994 Stock Incentive Plan. Incorporated herein by reference to Exhibit 10.29 to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2000.
10.18*	Amendment No. 6 to the Ceradyne, Inc. 1994 Stock Incentive Plan. Incorporate herein by reference to Exhibit 4.7 to the Registrant's Registration Statement on Form S-8 (File No. 333-64094).
10.19	Intentionally omitted.
10.20	Intentionally omitted.
10.21*	Amendment No. 7 to the Ceradyne, Inc. 1994 Stock Incentive Plan. Incorporated herein by referenced to Exhibit 10.34 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2002.
10.22*	Ceradyne, Inc. 2003 Stock Incentive Plan, as Amended and Restated as of April 11, 2005. Incorporated herein by reference to Exhibit 10.1 to the Registrant's Form 8-K Current Report dated May 23, 2005, filed with the Commission on May 26, 2005.
10.23*	Form of Stock Option Agreement for use under the 2003 Stock Incentive Plan. Incorporated herein by reference to Exhibit 10.2 to the Registrant's Form 8-K Current Report dated May 23, 2005, filed with the Commission on May 26, 2005.
10.24*	Form of Restricted Stock Unit Award Agreement for use under the 2003 Stock Incentive Plan. Incorporated herein by reference to Exhibit 10.3 to the Registrant's Form 8-K Current Report dated May 23, 2005, filed with the Commission on May 26, 2005.
10.25	Lease agreement between California State Teachers' Retirement System, as Landlord and CERADYNE, INC., as tenant. Incorporated herein by reference to Exhibit 10.23 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2003.

<u>Exhibit Number</u>	<u>Description</u>
10.26	Intentionally omitted.
10.27	Intentionally omitted
10.28	Intentionally omitted
10.29	Intentionally omitted
10.30*	Base Salaries Payable to Executive Officers during 2007. Incorporated herein by reference to Exhibit 10.1 of Registrant's Form 8-K Current Report dated March 19, 2007, filed with the Commission on March 23, 2007.
10.31*	Cash Bonus Plan for Executive Officers for 2007. Incorporated herein by reference to Exhibit 10.1 of Registrant's Form 8-K Current Report dated March 19, 2007, filed with the Commission on March 23, 2007.
10.32	Lease dated March 11, 1997 covering premises located at 3159-A Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.32 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.33	Extension No. 2, dated February 2, 2005, to Lease dated March 11, 1997 covering premises located at 3159-A Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.33 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.34	Lease dated January 24, 2001 covering premises located at 3161 Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.34 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.35	Extension No. 1, dated February 2, 2005, to Lease dated January 24, 2001 covering premises located at 3161 Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.35 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.36	Extension No. 4, dated February 2, 2005, to Lease dated March 31, 1986 covering premises located at 3163 Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.36 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.37	Extension No. 4, dated February 2, 2005, to Lease dated October 28, 1985 covering premises located at 3169-A Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.37 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.38	Lease dated October 28, 1985 covering premises located at 3169-B Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.38 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.39	Extension No. 4, dated February 2, 2005, to Lease dated October 28, 1985 covering premises located at 3169-B Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.39 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.40	Extension No. 4, dated February 4, 2005, to Lease dated August 5, 1986 covering premises located at 225 Paularino Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.40 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.41	Lease dated February 4, 2005, covering premises located at 201 Paularino Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.41 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.42	Lease dated February 4, 2005, covering premises located at 3159-B Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.42 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.43	Extension No. 1, dated February 7, 2005, to Lease dated March 23, 2004 covering premises located at 235 Paularino Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.43 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.

<u>Exhibit Number</u>	<u>Description</u>
10.44	Lease dated August 6, 2001 covering premises located at 3165-A Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.44 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.45	Extension No. 1, dated March 9, 2005, to Lease dated August 6, 2001 covering premises located at 3165-A Red Hill Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.45 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.46	Lease dated January 5, 2005 covering premises located at 205 Paularino Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.46 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
10.47	Extension No. 1, dated July 14, 2005, to Lease dated January 5, 2005, covering premises located at 205 Paularino Avenue, Costa Mesa, California. Incorporated herein by reference to Exhibit 10.47 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.
12.1	Computation of Ratio of Earnings to Fixed Charges.
14.1	Code of Business Conduct and Ethics. Incorporated herein by reference to Exhibit 14.1 to the Registrant's Annual Report on Form 10-K for the year ended December 31, 2004.
21.1	Subsidiaries of the Registrant.
23.1	Consent of Independent Registered Public Accounting Firm, PricewaterhouseCoopers LLP.
31.1	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

* Each of these exhibits constitutes a management contract, compensatory plan, or arrangement.

CERADYNE, INC.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To Board of Directors and Stockholders of Ceradyne, Inc.:

In our opinion, the accompanying consolidated balance sheets and related consolidated statements of income, stockholders' equity and cash flows present fairly, in all material respects, the financial position of Ceradyne, Inc. and its subsidiaries at December 31, 2007 and December 31, 2006, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2007 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2007 based on criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in Management's Report on Internal Control over Financial Reporting appearing under Item 9A. Our responsibility is to express opinions on these financial statements, and on the Company's internal control over financial reporting based on our integrated audits in 2007 and 2006. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

As discussed in Note 2 to the consolidated financial statements, the Company changed the manner in which it accounts for share-based compensation in fiscal 2006.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

As described in Management's Report on Internal Control over Financial Reporting, management has excluded Minco, Inc. and Ceradyne Boron Products from its assessment of internal control over financial reporting as of December 31, 2007 because they were acquired by the Company in purchase business combinations during 2007. We have also excluded Minco, Inc. and Ceradyne Boron Products from our audit of internal control over financial reporting. Minco, Inc. and Ceradyne Boron Products are wholly-owned subsidiaries whose total assets and total revenues represent, in aggregate, 13.3% and 2.6%, respectively, of the related consolidated financial statement amounts as of and for the year ended December 31, 2007.

/s/ PricewaterhouseCoopers LLP
Orange County, California
February 25, 2008

CERADYNE, INC.
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2007	2006
	(In thousands, except for share data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$155,103	\$ 13,547
Short term investments	29,582	190,565
Restricted cash	2,660	—
Accounts receivable, net of allowances for doubtful accounts of \$792 and \$1,158 in 2007 and 2006, respectively	85,346	77,162
Other receivables	5,704	3,289
Inventories	92,781	73,109
Production tooling	16,632	20,975
Prepaid expenses and other	12,391	11,859
Deferred tax asset	12,455	11,469
Total current assets	412,654	401,975
Property, plant and equipment, net	243,892	183,011
Long term investments	38,089	—
Intangible assets, net	37,578	8,389
Goodwill	46,848	16,518
Other assets	4,225	3,922
Total assets	<u>\$783,286</u>	<u>\$613,815</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 35,990	\$ 35,470
Accrued expenses	22,483	21,821
Income taxes payable	258	12,621
Total current liabilities	58,731	69,912
Long-term debt	121,000	121,000
Employee benefits	13,650	13,274
Other long term liability	4,985	—
Deferred tax liability	6,291	3,018
Total liabilities	<u>204,657</u>	<u>207,204</u>
Commitments and contingencies (Note 8)		
Stockholders' equity:		
Common Stock, \$0.01 par value: 100,000,000 authorized; 27,318,530 and 27,119,012 shares issued and outstanding at December 31, 2007 and 2006, respectively	272	272
Additional paid in capital	185,702	178,252
Retained earnings	361,301	217,036
Accumulated other comprehensive income	31,354	11,051
Total stockholders' equity	<u>578,629</u>	<u>406,611</u>
Total liabilities and stockholders' equity	<u>\$783,286</u>	<u>\$613,815</u>

The accompanying notes are an integral part of these consolidated statements

CERADYNE, INC.
CONSOLIDATED STATEMENTS OF INCOME

	Years Ended December 31,		
	2007	2006	2005
	(In thousands, except for per share data)		
Net sales	\$756,835	\$662,888	\$368,253
Cost of product sales	<u>450,787</u>	<u>401,991</u>	<u>237,115</u>
Gross profit	<u>306,048</u>	<u>260,897</u>	<u>131,138</u>
Operating expenses:			
Selling	26,917	22,919	20,694
General and administrative	40,801	35,293	21,014
Research and development	<u>17,552</u>	<u>9,909</u>	<u>7,802</u>
	<u>85,270</u>	<u>68,121</u>	<u>49,510</u>
Operating income	<u>220,778</u>	<u>192,776</u>	<u>81,628</u>
Other income (expense)			
Royalty income	174	120	145
Interest income	12,394	6,687	434
Miscellaneous, net.	(2,599)	(919)	275
Interest expense	<u>(4,204)</u>	<u>(4,105)</u>	<u>(9,252)</u>
	<u>5,765</u>	<u>1,783</u>	<u>(8,398)</u>
Income before provision for income taxes	226,543	194,559	73,230
Provision for income taxes	<u>82,278</u>	<u>66,155</u>	<u>26,452</u>
Net income	<u>\$144,265</u>	<u>\$128,404</u>	<u>\$ 46,778</u>
Net income per common share:			
Basic	\$ 5.29	\$ 4.77	\$ 1.90
Diluted	\$ 5.20	\$ 4.69	\$ 1.86
Shares used in computing per common share amounts:			
Basic	27,252	26,924	24,635
Diluted	27,732	27,352	25,107

The accompanying notes are an integral part of these consolidated statements

CERADYNE, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock		Retained Earnings	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Number of Shares	Amount				
	(In thousands, except for share data)					
Balance, December 31, 2004	24,479,420	\$ 79,964	\$ 41,854	\$ —	\$ 13,223	\$135,041
Comprehensive income:						
Net income	—	—	46,778	—	—	46,778
Net unrealized loss on available-for-sale securities	—	—	—	—	(96)	(96)
Minimum pension liability, net	—	—	—	—	(667)	(667)
Cumulative translation adjustment	—	—	—	—	(19,788)	(19,788)
Total comprehensive income	—	—	—	—	—	26,227
Issuance of common stock, net of issuance cost of \$534	2,070,000	84,680	—	—	—	84,680
Issuance of common stock	70,646	1,713	—	—	—	1,713
Issuance of restricted stock	—	1,728	—	(1,728)	—	—
Exercise of stock options	175,708	1,067	—	—	—	1,067
Amortization of deferred compensation	—	—	—	222	—	222
Tax benefit from exercise of stock options	—	1,570	—	—	—	1,570
Balance, December 31, 2005	26,795,774	170,722	88,632	(1,506)	(7,328)	250,520
Comprehensive income:						
Net income	—	—	128,404	—	—	128,404
Net unrealized loss on available-for-sale securities	—	—	—	—	(63)	(63)
Minimum pension liability, net	—	—	—	—	282	282
Cumulative translation adjustment	—	—	—	—	18,401	18,401
Total comprehensive income	—	—	—	—	—	147,024
FAS 158 pension adjustment, net	—	—	—	—	(241)	(241)
Issuance of common stock	29,188	571	—	—	—	571
Exercise of stock options	294,050	2,312	—	—	—	2,312
Tax benefit from exercise of stock options	—	2,524	—	—	—	2,524
Stock based compensation	—	3,901	—	—	—	3,901
Deferred compensation	—	(1,506)	—	1,506	—	—
Balance, December 31, 2006	27,119,012	178,524	\$217,036	—	\$ 11,051	\$406,611
Comprehensive income:						
Net income	—	—	144,265	—	—	144,265
Net unrealized loss on available-for-sale securities	—	—	—	—	(434)	(434)
Net change in pension liability	—	—	—	—	1,123	1,123
Cumulative translation adjustment	—	—	—	—	19,614	19,614
Total comprehensive income	—	—	—	—	—	164,568
Issuance of common stock	19,204	401	—	—	—	401
Exercise of stock options	180,314	1,297	—	—	—	1,297
Tax benefit from exercise of stock options	—	3,301	—	—	—	3,301
Stock based compensation	—	2,451	—	—	—	2,451
Balance, December 31, 2007	27,318,530	\$185,974	\$361,301	\$ —	\$ 31,354	\$578,629

The accompanying notes are an integral part of these consolidated statements

CERADYNE, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31		
	2007	2006	2005
	(In thousands)		
Cash flows from operating activities:			
Net income	\$ 144,265	\$ 128,404	\$ 46,778
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	26,751	18,054	15,203
Deferred income taxes	(2,288)	(4,938)	(2,722)
Stock compensation	2,451	3,901	222
Loss on equipment disposal	908	152	34
Changes in operating assets and liabilities, net of assets acquired:			
Accounts receivable, net	(1,584)	(17,392)	(10,395)
Other receivables	(2,149)	(607)	(233)
Inventories	(6,270)	(2,987)	(22,378)
Production tooling	4,473	(5,670)	(6,009)
Prepaid expenses and other	337	(4,388)	(431)
Other assets	(974)	27	(792)
Accounts payable	(3,797)	10,749	(6,730)
Accrued expenses	(827)	2,209	171
Income tax payable	(12,754)	3,762	2,728
Tax benefit from exercise of stock options	—	—	1,570
Other liabilities	1,125	7,265	4,102
Employee benefits	(1,066)	686	—
Other long term liability	4,985	—	—
Net cash provided by operating activities	<u>153,586</u>	<u>139,227</u>	<u>21,118</u>
Cash flows from investing activities:			
Purchases of property, plant and equipment	(42,245)	(36,008)	(20,223)
Changes in restricted cash	(2,660)	—	—
Purchases of marketable securities	(700,443)	(673,214)	—
Proceeds from sales and maturities of marketable securities	823,499	490,488	2,202
Acquisition of businesses, net of cash acquired	(99,098)	(6,679)	(3,697)
Proceeds from sale of equipment	9	—	—
Net cash used in investing activities	<u>(20,938)</u>	<u>(225,413)</u>	<u>(21,718)</u>
Cash flows from financing activities:			
Proceeds from common stock offering	—	—	85,169
Costs of common stock offering	—	—	(489)
Proceeds from issuance of common stock for stock plans	401	571	1,713
Proceeds from issuance of stock due to exercise of stock options	1,297	2,312	1067
Reduction in bank line of credit	—	—	(9,492)
Proceeds from long-term debt	—	—	121,000
Payments on long-term debt	—	—	(109,725)
Tax benefit due to exercise of stock options	3,531	2,884	—
Net cash provided by financing activities	<u>5,229</u>	<u>5,767</u>	<u>89,243</u>
Effect of exchange rates on cash and cash equivalents	<u>3,679</u>	<u>2,424</u>	<u>(1,622)</u>
Increase (decrease) in cash and cash equivalents	141,556	(77,995)	87,021
Cash and cash equivalents, beginning of period	13,547	91,542	4,521
Cash and cash equivalents, end of period	<u>\$ 155,103</u>	<u>\$ 13,547</u>	<u>\$ 91,542</u>
Supplemental disclosures of cash flow information:			
Interest paid	\$ 3,520	\$ 3,452	\$ 6,683
Income taxes paid	\$ 90,775	\$ 65,333	\$ 35,834
Supplemental schedule of non-cash financing activities:			
Fulfillment of 401(k) obligations through the issuance of stock	\$ 1,085	\$ 828	\$ 880

The accompanying notes are an integral part of these consolidated statements

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Description of Business

Ceradyne, Inc. ("Ceradyne" or "the Company") develops, manufactures and markets advanced technical ceramic products and components for defense, industrial, automotive/diesel and commercial applications. The Company's expertise in ceramic material science as well as a vertically integrated approach of designing much of its key equipment and controlling the manufacturing process from raw material powders to finished product allows the Company to design and manufacture precision, high quality advanced technical ceramic products to meet demanding customer specifications. The Company markets its products to a broad range of industries in 63 countries. The Company's customers include the U.S. government, prime government contractors and large industrial and commercial manufacturers.

In many high performance applications, products made of advanced technical ceramics meet specifications that similar products made of metals, plastics or traditional ceramics cannot achieve. Advanced technical ceramics can withstand extremely high temperatures, combine hardness with light weight, are highly resistant to corrosion and wear, and often have excellent electrical insulation capabilities, special electronic properties and low friction characteristics.

2. Summary of Significant Accounting Policies

a. Principles of Consolidation and Nature of Operations

The consolidated financial statements include the financial statements of Ceradyne, Inc. (a Delaware Corporation), and its subsidiaries. Ceradyne, Inc. and its subsidiaries are collectively referred to herein as the "Company". All significant intercompany accounts and transactions have been eliminated.

b. Cash and Cash Equivalents

The Company considers all highly liquid investments with an initial maturity of three months or less when purchased to be cash equivalents.

c. Investments

The Company's short term investments consist of marketable securities, primarily high-grade corporate and government securities. The Company's long term investments consist of auction rate securities. The Company classifies its investments as available-for-sale based on the Company's intent. As of December 31, 2007, the amount classified as available for sale is \$29.6 million, which is recorded at fair market value. Our long term investments at December 31, 2007 included \$38.1 million of auction rate securities net of a temporary impairment charge of \$0.8 million against other comprehensive income and an other than temporary impairment charge of \$2.1 million against current earnings. The Company's investments in auction rate securities represent interests in collateralized debt obligations supported by pools of residential and commercial mortgages or credit cards, insurance securitizations and other structured credits, including corporate bonds. These auction rate securities are intended to provide liquidity via an auction process that resets the applicable interest rate at predetermined calendar intervals, allowing investors to either roll over their holdings or gain immediate liquidity by selling such interests at par. During the second half of the year 2007, the auctions for these securities failed. As a result of current negative conditions in the global credit markets, auctions for the Company's investment in these securities have recently failed to settle on their respective settlement dates. Consequently, the investments are not currently liquid through the normal auction process and may be liquid when a buyer is found outside of the auction process.

The Company reviews impairments associated with the above in accordance with Emerging Issues Task Force (EITF) 03-1 and FSP SFAS 115-1 and 124-1, "The Meaning of Other-Than-Temporary-Impairment and Its Application to Certain Investments," to determine the classification of the impairment as "temporary" or "other-than-temporary." A temporary impairment charge results in an unrealized loss being recorded in the

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

other comprehensive income component of stockholders' equity. Such an unrealized loss does not reduce net income for the applicable accounting period because the loss is not viewed as other-than-temporary. The Company believes that a portion of the impairment of its auction rate securities investments is temporary and a portion is other-than-temporary.

d. Foreign Exchange Risk Management

The Company measures the financial statements of its foreign subsidiaries using the local currency as the functional currency. Assets and liabilities of these subsidiaries are translated at the exchange rate on the balance sheet date. Revenues, costs and expenses are translated at the rates of exchange prevailing during the year. Translation adjustments resulting from this process are included in stockholders' equity. Gains and losses from foreign currency transactions are included in other income, miscellaneous.

e. Accounts Receivable, Net

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. The allowance for doubtful accounts is determined by analyzing specific customer accounts and assessing the risk of uncollectibility based on insolvency, disputes or other collection issues. In addition, the Company routinely analyzes the different aging categories and establishes allowances based on the length of time receivables are past due (based on contractual terms). A write-off will occur if the settlement of the account receivable is less than the carrying amount or the Company ultimately determines the balance will not be collected. We do not have any off-balance-sheet credit exposure related to our customers. The following are changes in the allowance for doubtful accounts for the years ended December 31, 2007, 2006 and 2005 (in thousands):

	<u>Balance at Beginning of Year</u>	<u>Additions</u>	<u>Write-offs Net of Recoveries</u>	<u>Balance at End of Year</u>
December 31, 2007	\$1,158	\$ 111	\$477	\$ 792
December 31, 2006	\$ 545	\$1,025	\$412	\$1,158
December 31, 2005	\$ 456	\$ 220	\$131	\$ 545

f. Inventories

Inventories are stated at the lower of cost (determined on a standard cost basis which approximates first-in, first-out (FIFO)) or market. The write-down of inventory for obsolete items is based on management's estimate of the amount considered obsolete based on specific reviews of inventory items. In estimating the write-down, management relies on its knowledge of the industry as well as its current inventory levels. The amounts the Company will ultimately realize could differ from amounts estimated by management. Inventory costs include the cost of material, labor and manufacturing overhead. The following is a summary of inventories by component (in thousands):

	<u>December 31,</u>	
	<u>2007</u>	<u>2006</u>
Raw materials	\$22,772	\$16,398
Work-in-process	46,853	34,265
Finished goods	23,156	22,446
	<u>\$92,781</u>	<u>\$73,109</u>

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

g. Production Tooling

The Company's production tooling primarily consists of graphite tooling used in the manufacturing and furnace processes. This tooling is being amortized over three to nine months and is included in the cost of the products produced and expensed through cost of product sales in the income statement.

h. Property, Plant and Equipment, Net

Property, plant and equipment is recorded at cost and consists of the following (in thousands):

	December 31,	
	2007	2006
Land and Land Improvements	\$ 15,086	\$ 11,226
Building improvements	81,965	62,509
Machinery and equipment	179,727	138,557
Leasehold improvements	16,572	15,077
Office equipment	19,512	13,816
Construction in progress	16,880	9,020
	329,742	250,205
Accumulated depreciation and amortization	(85,850)	(67,194)
	<u>\$243,892</u>	<u>\$183,011</u>

Depreciation and amortization of property, plant and equipment are provided using the straight-line method over the following estimated useful lives:

Buildings	30 years
Machinery and equipment	3 to 12 years
Office equipment	5 years
Leasehold improvements	Shorter of 10 years or the term of lease

Maintenance, repairs and minor renewals are charged to expense as incurred. Repairs and maintenance expense approximated \$13.2 million, \$8.8 million, and \$6.1 million in 2007, 2006, and 2005, respectively. Additions and improvements are capitalized. When assets are disposed of, the applicable costs and accumulated depreciation and amortization are removed from the accounts and any resulting gain or loss is included in the results of operations. Depreciation expense was approximately \$23.7 million, \$18.1 million, and \$15.2 million in 2007, 2006, and 2005, respectively.

i. Goodwill and Intangible Assets, Net

In accordance with SFAS 142, goodwill is not amortized, but instead is subject to an annual assessment of impairment by applying a fair-value based test.

The Company performs an annual impairment test for goodwill in the fourth quarter of each year. Goodwill is allocated to six reporting units, which represent the Company's operating segments. The Company's reporting units for purposes of applying the provisions of SFAS 142 are: Advanced Ceramics Operations, Semicon Associates, Thermo Materials, ESK Ceramics, Ceradyne Canada and Boron Products (the legal name of this entity is Boron Products, LLC and it does business as Ceradyne Boron Products). SFAS 142 requires the Company to compare the fair value of the goodwill and indefinite lived intangible assets to the carrying amount on an annual basis to determine if there is potential impairment. If the fair value of goodwill and/or indefinite lived intangible assets is less than the carrying value, an impairment loss is recorded to the extent that the fair value of the goodwill and/or indefinite lived intangible assets is less than the carrying

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

value. Fair value is determined based on discounted cash flows, market multiples or appraised values as appropriate. At December 31, 2007, no impairment of goodwill had occurred. Intangible assets with definite lives are amortized over their estimated useful lives based on the economic consumption method.

The roll forward of the goodwill balance by segment for the years ended December 31, 2007 and 2006 is as follows (in thousands):

	<u>ACO</u>	<u>Semicon</u>	<u>Thermo</u>	<u>ESK</u>	<u>Canada</u>	<u>Boron Products</u>	<u>Total</u>
December 31, 2005	\$2,608	\$603	\$ 279	\$ 5,775	\$ —	\$ —	\$ 9,265
Acquisition of ESK Ceramics (Note 7)	—	—	—	2,760	—	—	2,760
Acquisition of Ceradyne Canada . . .	—	—	—	—	3,832	—	3,832
Translation	—	—	—	661	—	—	661
December 31, 2006	2,608	603	279	9,196	3,832	—	16,518
Acquisition of Minco, Inc.	—	—	11,099	—	—	—	11,099
Acquisition of Boron Products	—	—	—	—	—	18,251	18,251
Translation	—	—	—	980	—	—	980
December 31, 2007	<u>\$2,608</u>	<u>\$603</u>	<u>\$11,378</u>	<u>\$10,176</u>	<u>\$3,832</u>	<u>\$18,251</u>	<u>\$46,848</u>

The components of intangibles assets were as follows (in thousands):

	<u>December 31, 2007</u>			<u>December 31, 2006</u>		
	<u>Gross Amount</u>	<u>Accumulated Amortization</u>	<u>Net Amount</u>	<u>Gross Amount</u>	<u>Accumulated Amortization</u>	<u>Net Amount</u>
Amortizing Intangible Assets						
Backlog	\$ 1,795	\$1,795	\$ —	\$ 575	\$ 558	\$ 17
Developed technology . . .	11,617	1,666	9,951	6,007	820	5,187
Trade name	1,110	142	968	460	23	437
Customer Relationships . .	25,230	947	24,283	730	36	694
Non-compete agreement . .	500	178	322	—	—	—
Non-amortizing tradename . .	<u>2,054</u>	<u>—</u>	<u>2,054</u>	<u>2,054</u>	<u>—</u>	<u>2,054</u>
Total	<u>\$42,306</u>	<u>\$4,728</u>	<u>\$37,578</u>	<u>\$9,826</u>	<u>\$1,437</u>	<u>\$8,389</u>

All of the intangible assets were acquired in 2004, 2006 and 2007 (see Note 3).

The estimated useful lives for intangible assets are:

<u>Identified Intangible Asset</u>	<u>Estimated Useful Life in Years or Months</u>
Developed technology	10 years — 12.5 years
Tradename	10 years
Customer relationships	10 years — 12.5 years
Backlog	1 month — 3 months
Non-compete agreement	15 months

Amortization of definite-lived intangible assets will be approximately \$6,319 in fiscal year 2008, \$5,467 in fiscal year 2009, \$4,903 in fiscal year 2010, \$4,396 in fiscal year 2011 and \$3,549 in fiscal year 2012. Amortization expense was approximately \$3,131, in 2007, and \$565 and \$212 in 2006 and 2005, respectively.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

j. Sales Recognition

Sales are recorded when all of the following have occurred: an agreement of sale exists, product delivery and acceptance has occurred and collection is reasonably assured. Management is required to make judgments about whether or not collection is reasonably assured. The Company reduces revenue with reserves for sales returns. Allowances, which are recorded at the time revenue is recognized, in accordance with SFAS No. 48, "Revenue Recognition When Right of Return Exists," are based upon historical sales returns. The Company does not record a warranty reserve on the sale of its products. For its largest product line, body armor, all of which is sold to the U.S. Government, each lot of body armor is tested at an independent laboratory and the lot cannot be released for shipment to the U.S. Government until positive test results are received by both the U.S. Government and the Company. For its non-body armor sales, the Company has experienced minimal claims from these types of sales. Additionally, due to the inherent nature, strength, durability and structural properties of ceramics, as well as a rigid quality control program that includes, for some of our customers, having the customer accept quality test results prior to shipment, management does not believe a warranty reserve is necessary.

k. Net Income Per Share

Basic net income per share is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding. Diluted net income per share is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding plus the effect of any dilutive stock options and restricted stock units using the treasury stock method and the net share settlement method for the convertible debt. All share data in these financial statements have been adjusted to give retroactive effect to a 3-for-2 split of the Company's common stock in the form of a 50% stock dividend distributed on January 18, 2005.

The following is a summary of the number of shares entering into the computation of net income per common and common equivalent share:

	December 31,		
	2007	2006	2005
Weighted average number of shares outstanding	27,252,448	26,923,916	24,634,558
Dilutive stock options	285,427	364,002	448,115
Dilutive restricted stock units	39,853	63,931	24,722
Dilutive convertible note shares	154,274	—	—
Number of shares used in dilutive computation	<u>27,732,002</u>	<u>27,351,849</u>	<u>25,107,395</u>

l. Accounting for Long-Lived Assets

In accordance with SFAS 144, long-lived assets and intangible assets with definite lives are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Impairment indicators include, among other conditions, cash flow deficits, historic or anticipated declines in revenue or operating profit and adverse legal or regulatory developments. If it is determined that such indicators are present and the review indicates that the assets will not be fully recoverable, based on undiscounted estimated cash flows over the remaining amortization periods, their carrying values are reduced to estimated fair market value. Estimated fair market value is determined primarily using the anticipated cash flows discounted at a rate commensurate with the risk involved. For the purposes of identifying and measuring impairment, long-lived assets are grouped with other assets and liabilities at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

m. Use of Estimates

The preparation of financial statements in accordance with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates.

n. Engineering and Research

The costs associated with application engineering and internally-funded research are included in cost of product sales or other operating expenses. Costs associated with research and development were \$17.6 million, \$9.9 million and \$7.8 million for years ended December 31, 2007, 2006 and 2005, respectively. In addition, the Company historically has and continues to engage in application engineering and internally funded research to improve and reduce the cost of products and to develop new products. Costs associated with engineering were approximately \$8.0 million, \$7.3 million and \$7.1 million in 2007, 2006 and 2005, respectively, and are included in cost of product sales.

o. Fair Value of Financial Instruments

The carrying value of accounts receivable and trade payables approximates the fair value due to their short-term maturities. The carrying value of the Company's unused line of credit is considered to approximate fair market value, as the interest rates of these instruments are based predominantly on variable reference rates. The fair value of long-term debt was \$128.7 million and is based on quoted market prices at December 31, 2007.

p. Income Taxes

The Company accounts for income taxes using the asset and liability approach. Under this approach, deferred taxes are determined based on the differences between the financial statements and the tax bases using rates as enacted in tax laws. A valuation allowance is established if it is "more likely than not" that all or a portion of the deferred tax asset will not be realized.

In June 2006, the Financial Accounting Standards Board ("FASB") issued Interpretation No. 48, "Accounting for Uncertainty in Income Taxes" ("FIN 48"). FIN 48 prescribes detailed guidance for the financial statement recognition, measurement and disclosure of uncertain tax positions recognized in an enterprise's financial statements in accordance with FASB Statement No. 109, Accounting for Income Taxes. Tax positions must meet a more-likely-than-not recognition threshold at the effective date to be recognized upon the adoption of FIN 48 and in subsequent periods. The Company adopted FIN 48 effective January 1, 2007 and the provisions of FIN 48 have been applied to all tax positions under Statement No. 109, "Accounting for Income Taxes" ("SFAS 109") upon initial adoption. The cumulative effect of applying the provisions of this interpretation had no effect on the opening balance of retained earnings for our fiscal year 2007.

q. Share-Based Compensation

On January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123 (revised 2004), "Share-Based Payment" ("SFAS 123(R)") which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors including employee stock options based on estimated fair values. SFAS 123(R) supersedes the Company's previous accounting under Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB 25") for periods beginning in fiscal 2006. In March 2005, the SEC issued Staff Accounting Bulletin No. 107, "Share

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Based Payment" ("SAB 107") relating to SFAS 123(R). The Company has applied the provisions of SAB 107 in its adoption of SFAS 123(R).

On November 10, 2005, FASB issued Staff Position No. SFAS 123(R)-3, "Transition Election Related to Accounting for Tax Effects of Share-Based Payment Awards" ("SFAS 123(R)-3"). The alternative transition method includes a simplified method to establish the beginning balance of the additional paid-in capital pool ("APIC pool") related to the tax effects of employee share-based compensation, and to determine the subsequent impact on the APIC pool and Consolidated Statements of Cash Flows of the tax effects of employee share-based compensation awards that are outstanding upon adoption of SFAS 123(R). The Company has elected to adopt the provisions of SFAS 123(R)-3.

r. Comprehensive Income

Comprehensive income encompasses all changes in equity other than those arising from transactions with stockholders, and consists of net income, currency translation adjustments, pension liability changes and unrealized net gains and losses on investments classified as available-for-sale. As of December 31, 2007 and 2006, accumulated other comprehensive income is as follows (in thousands):

	December 31,	
	2007	2006
Unrealized loss on available-for-sale-securities, net	\$ (640)	\$ (206)
Net change in pension liability	172	(951)
Cumulative translation adjustment	31,822	12,208
	<u>\$31,354</u>	<u>\$11,051</u>

s. Reclassifications

Certain reclassifications have been made to the 2006 statements to conform to the 2007 presentation.

t. New Accounting Pronouncements

In December 2007, the FASB issued SFAS No. 141R, "Business Combinations" ("SFAS 141R") which establishes principles and requirements for how the acquirer of a business recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree. The statement also provides guidance for recognizing and measuring the goodwill acquired in the business combination and determines what information to disclose to enable users of the financial statement to evaluate the nature and financial effects of the business combination. SFAS 141R is effective for financial statements issued for fiscal years beginning after December 15, 2008. Accordingly, any business combinations the Company engages in will be recorded and disclosed following existing GAAP until January 1, 2009. The Company does not expect SFAS No. 141R to have a significant impact on its consolidated financial statements when effective, but the nature and magnitude of the specific effects will depend upon the nature, terms and size of the acquisitions the Company consummates after the effective date. The Company is evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

In December 2007, the FASB issued SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements, an amendment of ARB No. 51" ("SFAS 160"). SFAS 160 introduces significant changes in the accounting and reporting for business acquisitions and noncontrolling interest ("NCI") in a subsidiary. SFAS 160 also changes the accounting for and reporting for the deconsolidation of a subsidiary. Companies are required to adopt the new standard for fiscal years beginning after January 1, 2009. The Company is

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

In February 2007, the FASB issued SFAS No. 159 "Fair Value Option for Financial Assets and Financial Liabilities" ("SFAS 159") which permits entities to measure many financial instruments and certain other items at fair value. Companies are required to adopt the new standard for fiscal years beginning after November 15, 2007. The Company is evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

In September 2006, the FASB issued SFAS No. 157 "Fair Value Measurement" ("SFAS 157") which defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurement. Companies are required to adopt the new standard for fiscal years beginning after November 15, 2007. In February 2008, the FASB decided to issue a final Staff Position to allow a one-year deferral of adoption of SFAS 157 for non-financial assets and non-financial liabilities that are recognized or disclosed at fair value in the financial statements on a nonrecurring basis. The FASB also decided to amend SFAS 157 to exclude FASB Statement No. 13 and its related interpretive accounting pronouncements that address leasing transactions. The Company is evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

In June 2007 the FASB ratified EITF No. 07-3, "Accounting for Nonrefundable Advance Payments for Goods or Services to Be Used in Future Research and Development Activities" ("EITF 07-3") which requires non-refundable advance payments for goods and services to be used in future research and development activities to be recorded as an asset and the payments to be expensed when the research and development activities are performed. EITF 07-3 is effective for fiscal years beginning after December 15, 2007. The Company is evaluating the impact of this standard and currently does not expect it to have a significant impact on its financial position, results of operations or cash flows.

3. Acquisitions

On July 10, 2007, the Company completed the acquisition of Minco, Inc. ("Minco") based in Midway, Tennessee, pursuant to a Sale and Purchase Agreement of the same date. Minco's results from operations are included in the Company's Consolidated Statements of Income from the date of acquisition.

The purchase price was approximately \$28.1 million in cash, which included \$216,000 of transaction costs.

Minco is a key supplier of raw materials to Ceradyne's Thermo Materials division. Minco was founded in 1977 to manufacture and market fused silica powders for a wide range of industrial applications. Minco's fusing process, which is the basis of its entire product line, is based on its proprietary technology.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In accordance with SFAS No. 141, "Business Combinations" ("SFAS 141"), the acquisition has been accounted for under the purchase method of accounting. The estimates of fair value of the assets acquired and liabilities assumed are preliminary. The following table summarizes the components of the purchase price (in thousands):

Cash	\$27,905
Transaction costs	<u>216</u>
Total purchase price	<u>\$28,121</u>
Fair value of assets acquired and liabilities assumed:	
Cash	\$ 332
Accounts receivable, net	2,503
Inventory	3,301
Property, plant and equipment	7,114
Other assets	1,473
Assumed liabilities	(1,892)
Deferred taxes	(4,789)
Backlog	110
Developed technology	1,510
Tradename	650
Customer relationships	6,210
Non-compete	500
Goodwill	<u>11,099</u>
	<u>\$28,121</u>

The goodwill resulting from the Minco acquisition is included with the Thermo Materials segment. Goodwill will not be amortized but is subject to an ongoing assessment for impairment. Under SFAS 109 the goodwill from Minco is not tax deductible.

The estimated useful lives for Minco's intangible assets are as follows:

<u>Identified Intangible Asset</u>	<u>Estimated Useful Life in Years or Months</u>
Developed technology	10 years
Tradename	10 years
Customer relationships	10 years
Backlog	1 month
Non-compete agreement	15 months

On August 31, 2007, the Company completed the purchase of EaglePicher Boron LLC. ("EP Boron") located in Quapaw, Oklahoma pursuant to a Sale and Purchase Agreement dated June 27, 2007. EP Boron was renamed Boron Products, LLC and is doing business as Ceradyne Boron Products. Their results from operations are included in the Company's Consolidated Statements of Income from the date of acquisition.

The purchase price was approximately \$71.3 million in cash which included \$1.7 million of transaction costs.

EP Boron was established in the early 1970's to produce the boron isotope ¹⁰B. This isotope is a strong neutron absorber and is used for both nuclear waste containment and nuclear power plant neutron radiation control. EP Boron also produces complementary chemical isotopes used in the normal operation and control of nuclear power plants. Ceradyne anticipates that this acquisition will further strengthen its entry into the nuclear waste containment and other nuclear power plant related ceramic materials markets.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In accordance with SFAS 141, the acquisition has been accounted for under the purchase method of accounting. The estimates of fair value of the assets acquired and liabilities assumed are preliminary. The following table summarizes the components of the purchase price (in thousands):

Cash	\$69,600
Transaction costs	<u>1,709</u>
Total purchase price	<u>\$71,309</u>
Fair value of assets acquired and liabilities assumed:	
Accounts receivable, net	\$ 2,811
Inventory	6,375
Property, plant and equipment	23,636
Other assets	61
Assumed liabilities	(1,505)
Backlog	1,110
Developed technology	2,280
Customer relationships	18,290
Goodwill	<u>18,251</u>
	<u>\$71,309</u>

In accordance with SFAS 141, the new intangible asset balance for each acquisition will be allocated between identifiable intangible assets and remaining goodwill. Under SFAS 109, the goodwill from this acquisition is tax deductible over 15 years.

The estimated useful lives for Ceradyne Boron Products' intangible assets are as follows:

<u>Identified Intangible Asset</u>	<u>Estimated Useful Life in Years or Months</u>
Developed technology	12.5 years
Customer relationships	12.5 years
Backlog	3 months

The Company considers these acquisitions to be immaterial for disclosure of proforma financial information.

On June 30, 2006, the Company completed the purchase of certain assets and technology related to the "Boral®" product line of AAR Manufacturing, Inc., a subsidiary of AAR Corp. The purchase price for the acquisition was approximately \$6.7 million consisting of all cash. The Company considers this to be an immaterial acquisition.

The purchase price was allocated as follows (in thousands):

<u>Boral Product Line</u>	
Net tangible assets	\$ 717
Intangible assets (estimated useful life of 10 years)	2,130
Goodwill	<u>3,832</u>
Total purchase price	<u>\$6,679</u>

4. Debt and Bank Borrowing Arrangements; Convertible Note and Common Stock Offerings

During December 2005, the Company completed a public offering of 2,070,000 shares of common stock at a price to the public of \$43.31 per share. The Company received net proceeds of approximately

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

\$84.6 million from this offering after deducting offering expenses and underwriting discounts of \$5.0 million. Concurrent with the common stock offering, during December 2005, the Company issued \$121.0 million of 2.875% senior subordinated convertible notes due December 15, 2035.

Interest on the notes is payable on December 15 and June 15 of each year, commencing on June 15, 2006. The notes are convertible into 17.1032 shares of Ceradyne's common stock for each \$1,000 principal amount of the notes (which represents a conversion price of approximately \$58.47 per share), subject to adjustment. The notes are convertible only under certain circumstances, including if the price of the Company's common stock reaches specified thresholds, if the notes are called for redemption, if specified corporate transactions or fundamental change occur, or during the 10 trading days prior to maturity of the notes. The Company may redeem the notes at any time after December 20, 2010, for a price equal to 100% of the principal amount plus accrued and unpaid interest, including contingent interest (as described below), if any, up to but excluding the redemption date. In addition, the Notes may be converted, at the option of the holders, on or prior to the final maturity date if during the five business day period after any five consecutive trading day period in which the trading price per \$1,000 principal value amount of notes for each day of that period was less than 98% of the product of the closing price for our common stock for each day of that period and the applicable conversion rate. This conversion provision represents an embedded derivative. However, based on the de minimus value associated with this feature, no value was assigned at issuance and at December 31, 2007.

With respect to each \$1,000 principal amount of the notes surrendered for conversion, the Company will deliver the conversion value to holders as follows: (1) an amount in cash equal to the lesser of (a) the aggregate conversion value of the notes to be converted and (b) \$1,000, and (2) if the aggregate conversion value of the notes to be converted is greater than the \$1,000, an amount in shares or cash equal to such aggregate conversion value in excess of \$1,000.

The notes contain put options, which may require the Company to repurchase in cash all or a portion of the notes on December 15, 2012, December 15, 2015, December 15, 2020, December 15, 2025, and December 15, 2030 at a repurchase price equal to 100% of the principal amount of the notes to be repurchased plus accrued and unpaid interest, including contingent interest (as described below), if any, up to but excluding the repurchase date.

The Company is obligated to pay contingent interest to the holders of the notes during any six-month period from June 15 to December 14 and from December 15 to June 14, commencing with the six-month period beginning December 20, 2010 and ending on June 14, 2011, if the average trading price of the note for the five trading day period ending on the third trading day immediately preceding the first day of the relevant contingent interest period equals \$1,200 (120% of the principal amount of a note) or more. The amount of contingent interest payable per note for any relevant contingent interest period shall equal 0.25% per annum of the average trading price of a note for the five trading day period ending on the third trading day immediately preceding the first day of the relevant contingent interest period. This contingent interest payment feature represents an embedded derivative. However, based on the de minimus value associated with this feature, no value was assigned at issuance and at December 31, 2007.

On or prior to the maturity date of the notes, upon the occurrence of a fundamental change, under certain circumstances, the Company will provide for a make whole amount by increasing, for the time period described herein, the conversion rate by a number of additional shares for any conversion of the notes in connection with such fundamental change transactions. The amount of additional shares will be determined based on the price paid per share of Ceradyne's common stock in the transaction constituting a fundamental change and the effective date of such transaction. This make whole premium feature represents an embedded derivative. Since this feature has no measurable impact on the fair value of the notes and no separate trading market exists for this derivative, the value of the embedded derivative was determined to be de minimis. Accordingly, no value has been assigned at issuance or at December 31, 2007.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The Company utilizes a convertible bond pricing model and a probability weighted valuation model, as applicable, to determine the fair values of the embedded derivatives noted above.

On December 19, 2005, the Company repaid the balance of its term loan of \$108.9 million and \$9.8 million of its line of credit, and approximately \$0.1 million of accrued interest, using the net proceeds from the notes and proceeds from its concurrent public offering of its common stock. The Company retired the credit facility. As a result of the termination of the term loan, the Company wrote off the remaining unamortized debt issuance costs of approximately \$2.6 million in the fourth quarter of 2005.

In December 2005, the Company established a new unsecured \$10.0 million line of credit. As of December 31, 2007, there were no outstanding amounts on the line of credit. However, the available line of credit at December 31, 2007 has been reduced by an outstanding letter of credit in the amount of \$1.5 million. The interest rate on the credit line is based on the LIBOR rate for a period of one month, plus a margin of 0.6 percent, which equaled 5.3 percent as of December 31, 2007.

Pursuant to the bank line of credit, the Company is subject to certain covenants, which include, among other things, the maintenance of specified minimum amounts of tangible net worth and quick assets to current liabilities ratio. At December 31, 2007, the Company was in compliance with these covenants.

5. Financial Instruments

Foreign Exchange Risk Management

The Company enters into foreign exchange forward contracts to reduce earnings and cash flow volatility associated with foreign exchange rate changes to allow management to focus its attention on its core business operations. Accordingly, the Company enters into contracts which change in value as foreign exchange rates change to economically offset the effect of changes in value of foreign currency assets and liabilities, commitments and anticipated foreign currency denominated sales and operating expenses. The Company enters into foreign exchange forward contracts in amounts between minimum and maximum anticipated foreign exchange exposures, generally for periods not to exceed one year. These derivative instruments are not designated as accounting hedges. As of December 31, 2007, the Company had an outstanding forward exchange contract for 23.0 million euros that matures in March 2008.

6. Income Taxes

The provision for income taxes is comprised of the following for the year ended December 31 (in thousands):

	<u>2007</u>	<u>2006</u>	<u>2005</u>
Current, domestic	\$79,406	\$66,862	\$28,244
Current, foreign	<u>4,897</u>	<u>4,713</u>	<u>1,836</u>
Current, total	<u>84,303</u>	<u>71,575</u>	<u>30,080</u>
Deferred, domestic	(984)	(6,458)	(4,761)
Deferred, foreign	<u>(1,041)</u>	<u>1,038</u>	<u>1,133</u>
Deferred, total	<u>(2,025)</u>	<u>(5,420)</u>	<u>(3,628)</u>
Provision for income taxes	<u>\$82,278</u>	<u>\$66,155</u>	<u>\$26,452</u>

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The components of the Company's deferred tax asset (liability) as of December 31, 2007 and 2006 are as follows (in thousands):

	<u>December 31,</u>	
	<u>2007</u>	<u>2006</u>
Current deferred tax assets:		
Inventory	\$ 5,342	\$ 5,968
Vacation accrual	1,061	980
Bad debt allowance	323	454
Accrued payroll	1,759	1,456
State taxes	3,310	2,046
Other	1,228	844
Total current deferred tax asset	<u>\$ 13,023</u>	<u>\$ 11,748</u>
Current deferred tax (liability):		
Prepaid expenses	(568)	(279)
Total current deferred tax (liability)	<u>(568)</u>	<u>(279)</u>
Net current deferred tax asset	<u>\$ 12,455</u>	<u>\$ 11,469</u>
Non current deferred tax assets:		
Deferred compensation	\$ 2,653	\$ 2,182
Accrued payroll	1,638	1,070
Unrealized currency loss	358	643
State taxes	257	55
Net operating loss	494	—
Unrealized investment loss	861	—
Other	—	19
Total non current deferred tax assets	<u>6,261</u>	<u>3,969</u>
Non current deferred tax (liabilities):		
Depreciation and amortization	(7,859)	(6,987)
Fixed asset step up	(911)	—
Intangible asset set up	(3,307)	—
Other	(475)	—
Total non current deferred tax (liabilities)	<u>(12,552)</u>	<u>(6,987)</u>
Net non current deferred tax (liability)	<u>(\$6,291)</u>	<u>(\$3,018)</u>

The Company had net operating loss ("NOL") carryforwards at December 31, 2007, of \$1.4 million for federal income tax purposes. This NOL was generated by one of the recently acquired entities. It is subject to potential utilization restrictions as a result of the ownership change. The NOL will begin to expire in 2021.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The effective income tax rate for the years ended December 31, 2007, 2006 and 2005 differs from the Federal statutory income tax rate due to the following items (in thousands):

	December 31,		
	2007	2006	2005
Income before taxes, domestic	\$215,608	\$179,497	\$64,340
Income before taxes, foreign	10,845	15,062	8,890
Income before taxes, total	<u>\$226,543</u>	<u>\$194,559</u>	<u>\$73,230</u>
Provision for income taxes at federal statutory rate (35%)	79,290	68,096	25,631
State income taxes, net of federal benefit	9,468	2,270	3,453
Permanent Items	584	398	169
Extraterritorial income exclusion	—	(2,417)	(1,010)
Credits	(502)	(399)	(389)
Manufacturing deduction	(4,147)	(1,600)	(310)
Other	<u>(2,415)</u>	<u>(193)</u>	<u>(1,092)</u>
Provision for income taxes	<u>\$ 82,278</u>	<u>\$ 66,155</u>	<u>\$26,452</u>
Effective tax rate	<u>36.32%</u>	<u>34.00%</u>	<u>36.12%</u>

The exercise of stock options represents a tax benefit and has been reflected as a reduction of taxes payable and an increase to the additional paid-in capital account. The benefit recorded was \$3.3 million, \$4.9 million and \$1.6 million for the years ended December 31, 2007, 2006 and 2005, respectively.

The Company's effective tax rate considers the impact of undistributed earnings of subsidiary companies outside of the U.S. As of December 31, 2007, the Company does not plan to repatriate earnings from foreign subsidiaries. However, from time to time and to the extent that the Company can repatriate overseas earnings on a tax-free basis, the Company's foreign subsidiaries will pay dividends to the U.S. Material changes in the Company's working capital and long-term investment requirements could impact the decisions made by management with respect to the level and source of future remittances and, as a result, the Company's effective tax rate.

The Company's China subsidiary generated a tax loss in 2007. The China subsidiary has a tax holiday which will expire 5 years after the first fiscal year that the subsidiary generates taxable net income.

The Company has adopted FIN 48 effective January 1, 2007. The adoption of FIN 48 resulted in no change to the reserve for unrecognized tax benefits (UTBs) that existed under FAS 5 at December 31, 2006. As such, there is no change recorded to retained earnings as a result of the adoption. A reconciliation of the beginning and ending amount of UTBs is as follows (in thousands):

Balance at January 1, 2007	\$ 6,178
Additions based on tax positions related to the current year	494
Additions for tax positions of prior years	—
Reductions of tax positions of prior years	<u>(2,116)</u>
Balance at December 31, 2007	<u>\$ 4,556</u>

It is the Company's policy to classify accrued interest and penalties as part of the income tax provision. The Company recognized \$77,000 of interest expense related to UTBs for the year ended December 31, 2007. The accrued interest on the UTBs at December 31, 2007 and January 1, 2007 was \$0.7 million and \$0.6 million respectively. The tax benefit of this accrued interest was \$250,000 and \$202,000 respectively. It is anticipated

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

that any change in the above UTBs will impact the effective tax rate. For UTBs, that exist at December 31, 2007, the Company expects a reduction of approximately \$500,000 within the next 12 months. At December 31, 2007, the 2003-2007 years are open and subject to potential examination in one or more jurisdictions. The Company is currently under federal income tax examinations for the 2005 tax year and under state income tax examination for the tax years 2003 through 2005.

7. Employee Retirement and Other Benefit Plans

Supplemental Retirement Plan

In December 1988, the Board of Directors of the Company approved the adoption of a supplemental retirement plan, the Ceradyne SMART 401(k) Plan (the Plan), in which substantially all employees are eligible to participate after completing 90 days of employment. Participation in the Plan is voluntary. An employee may elect to contribute up to the maximum deferred tax amount of \$15,500 in 2007 as a basic contribution. The Company may contribute any amount which the Board of Directors annually determines appropriate. Company contributions fully vest and are non-forfeitable after the participant has completed five years of service. The Company's related contributions for the years ended December 31, 2007, 2006 and 2005 were \$1.5 million, \$1.1 million and \$0.9 million, respectively.

Pension and Other Postretirement Benefit Plans

In September 2006, the FASB issued SFAS No. 158 "Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans — an amendment of FASB Statement No. 87, 88, 106, and 132 (R)" ("SFAS 158").

The most significant change is the requirement for an employer to recognize the overfunded or underfunded status of a defined benefit postretirement plan as an asset or liability in its statement of financial position and to recognize changes in that funded status in the year in which the changes occur through comprehensive income of a business entity. Public companies are required to initially recognize the funded status of a defined benefit postretirement plan and to provide the required disclosures as of the end of the fiscal year ending after December 15, 2006. The Company adopted SFAS 158 in the fourth quarter ended December 31, 2006, and its adoption did not have a significant impact on our consolidated financial position.

German Pension and Benefit Plans

The Company provides pension benefits to the employees of its ESK Ceramics subsidiary in Germany and France. These pension benefits are rendered for the time after the retirement of the employees by payments into legally independent pension and relief facilities. They are generally based on length of service, wage level and position in the company. The direct and indirect obligations comprise obligations for pensions that are already paid currently and expectations for those pensions payable in the future. The Company has four separate plans in Germany: a) Pensionskasse — Old; b) Pensionskasse — New; c) Additional Compensation Plan; and d) Deferred Compensation plan. For financial accounting purposes, the Additional and Deferred Compensation Plans are accounted for as single-employer defined benefit plans, Pensionskasse — Old is a multiemployer defined benefit plan and the Pensionskasse — New is a defined contribution plan.

The measurement date for the Company's pension plan assets and obligations, including Pensionskasse — Old, is December 31. Assumed discount rates and rates of increase in remuneration used in calculating the projected benefit obligation together with long-term rates of return on plan assets vary according to the economic conditions of the country in which pension plans are situated.

As noted above the Pensionskasse — Old is a multi employer defined benefit pension plan. ESK Ceramics is one of numerous employers who participate in the plan. The accumulated benefit obligations and projected benefit obligations are computed utilizing the same methods and assumptions as those used in the Additional

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

and Deferred Compensation Plans noted above and are solely based on the ESK Ceramics employees participating in the plan. However, the assets of the plan are allocated based upon the relative percentage of the projected benefit obligation to the total for all participating employers. The Company had incorrectly accounted for this plan since the acquisition of ESK Ceramics. The resulting correction was to reduce other long term assets and increase goodwill by \$2.8 million as of December 31, 2006. The long-term asset structure of the Pensionskasse is determined significantly by asset-liability-studies conducted regularly calculating an optimal investment portfolio based on the known business in force and the actuarial assumptions. Input parameters are assumed risk and return rates as well as specific correlation samples of the respective asset categories. The priority objective of the asset allocation is to achieve a rate of return compensating the benefit commitments within the limits of a justifiable risk and volatility. The operative investment policy has to conform to legal requirements (insurance control and investment law) as well as to internal investment -guidelines and restrictions. The use of derivatives is permitted within the legally allowed scope. The expected overall rate of return is based on numerous factors like the portfolio selection and the anticipated long-term rate of return of the respective asset categories determined by the Black-Litterman Market Equilibrium Model. The expected long-term rate of return therewith is approximated to long-term historical averages, future expectations are also covered by the Black-Litterman Model. In certain cases assumptions in expected long-term rates of return are modified marginally by the responsible manager of the WACKER Pensionskasse in order to consider personal experience and different medium-term market expectations respectively. The projected benefit obligations for the pension plan "continuation of payments in case of death" were \$53,477 and \$43,512 for the years ended December 31, 2007 and 2006.

The Pensionskasse — New covers all German employees with membership as of January 1, 2005. Contributions and costs are determined as 2.0 percent of each covered employee's salary and totalled \$110,116 in 2007, \$40,783 in 2006 and \$14,102 in 2005.

Components of net periodic benefit costs under the Additional and Deferred Compensation Plans for the years ended December 31, 2007, 2006 and 2005 were as follows (in thousands):

	<u>2007</u>	<u>2006</u>	<u>2005</u>
Service cost	\$(463)	\$(442)	\$(306)
Interest cost	(400)	(335)	(303)
Amortization	<u>(60)</u>	<u>(85)</u>	<u>(14)</u>
Net periodic benefit cost	<u><u>\$(923)</u></u>	<u><u>\$(862)</u></u>	<u><u>\$(623)</u></u>

The weighted-average assumptions used to determine net periodic benefit cost were as follows:

	<u>2007</u>	<u>2006</u>	<u>2005</u>
Discount rate	5.75%	4.50%	4.50%
Rate of long-term compensation increase	2.50%	2.50%	2.50%

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The funded status and components of the change in benefit obligations of the Additional and Deferred Compensation Plans for December 31, 2007 and 2006 were as follows (in thousands):

	<u>2007</u>	<u>2006</u>
Funded Status at end of year:		
Projected benefit obligation	\$(8,503)	\$(8,617)
Assets at fair value	—	—
Funded status	(8,503)	(8,617)
Unrecognized actuarial losses	—	(1,663)
Unfunded pension cost before equity adjustment	(8,503)	(6,954)
Additional minimum liability	—	(1,273)
Pension Liability before FAS 158	(8,503)	(8,226)
Effect of FAS 158 recognized in OCI	—	(391)
Pension liability after FAS 158	<u>\$(8,503)</u>	<u>\$(8,617)</u>
Change in projected benefit obligation:		
Projected benefit obligation at beginning of year	\$(8,617)	\$(7,455)
Foreign currency exchange rate changes	(855)	(867)
Service costs	(463)	(442)
Interest costs	(400)	(335)
Actuarial gains	1,722	402
Benefits paid	<u>110</u>	<u>80</u>
Projected benefit obligation at end of year	<u>\$(8,503)</u>	<u>\$(8,617)</u>
Net amounts recognized in consolidated balance sheet:		
Current liabilities	\$ (106)	\$ (104)
Non-current liabilities	\$(8,397)	\$(8,513)
Accumulated benefit obligation	<u>\$(8,140)</u>	<u>\$(8,226)</u>

The weighted-average assumptions used to determine pension benefit obligations were as follows:

	<u>2007</u>	<u>2006</u>
Discount rate	5.75%	4.50%
Rate of long-term compensation increase	2.50%	2.50%

Components of the related tax effects for each component of other comprehensive income follows related to the Additional and Deferred Compensation Plans for December 31, 2007 and 2006 are as follows (in thousands):

	<u>Before-Tax Amount</u>	<u>Tax (Expense) or Benefit</u>	<u>Net-of-Tax Amount</u>
Accumulated other comprehensive income at beginning of year...	\$(1,542)	\$ 591	\$ (951)
Net actuarial loss arising during current year	1,722	(660)	1,062
Amortization of actuarial gain	60	(17)	43
Foreign currency effect	<u>122</u>	<u>(48)</u>	<u>74</u>
Accumulated other comprehensive income at end of year	<u>\$ 362</u>	<u>\$(134)</u>	<u>\$ 228</u>

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

No components of other comprehensive income will be amortized into income in 2008.

	<u>Before- Tax Amount</u>	<u>Tax (Expense) or Benefit</u>	<u>Net-of- Tax Amount</u>
Accumulated other comprehensive income at beginning of year . . .	\$(1,608)	\$616	\$(992)
Net actuarial loss arising during current year	11	(4)	7
Amortization of actuarial gain (loss).	34	(13)	21
Foreign currency effect	21	(8)	13
Accumulated other comprehensive income at end of year	<u>\$(1,542)</u>	<u>\$591</u>	<u>\$(951)</u>

The Company expects to contribute to its defined benefit plans in 2008 (in thousands):

Pensionkasse — Old.	\$ 680
Additional Compensation	734
Deferred Compensation	190
Total contributions in 2008.	<u>\$1,604</u>

The following estimated future benefit payments are expected to be paid in the years indicated (in thousands):

2008	\$ 107
2009	144
2010	163
2011	233
2012	265
2013 – 2017.	1,674

Assumed discount rates and rates of increase in remuneration used in calculating the projected benefit obligation together with long-term rates of return on plan assets vary according to the economic conditions of the country in which pension plans are situated. The discount rate is typically changed at least annually. The interest rate used is comparable to long-term corporate bonds with a AA rating.

Ceradyne Boron Products Pension Plans

The Company provides pension benefits to employees in its Ceradyne Boron Products subsidiary. The plans cover employees who meet specified eligibility requirements. The measurement date for the Company's pension plan assets and obligations is December 31. The plans became obligations of the Company as a result of the acquisition of Ceradyne Boron Products on August 31, 2007 (refer to Note 3). The information presented below is for the period September 1, 2007 through December 31, 2007.

The Company expects to make a contribution at least as great as the minimum required by the IRS funding rules to the plan during the upcoming year. Funding requirements for subsequent years are uncertain and will significantly depend on the assumptions used to calculate plan funding levels, the actual return on plan assets, changes in the employee groups covered by the plan, and any legislative or regulatory changes affecting plan funding requirements. For tax planning, financial planning, cash flow management or cost reduction purposes the Company may increase, accelerate, decrease or delay contributions to the plan to the extent permitted by law.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Components of the net periodic benefit cost for December 31, 2007 were as follows (in thousands):

Service costs	\$ 39
Interest costs	183
Expected return on assets	<u>(235)</u>
Net periodic benefit cost	<u>\$ (13)</u>

The weighted-average assumptions used to determine net periodic benefit costs were as follows:

	<u>2007</u>
Discount rate	6.17%
Rate of long-term compensation increase	4.00%
Expected return on plan assets	8.00%

The funded status and components of the change in benefit obligations and changes in plan assets for the year ended December 31, 2007 were as follows (in thousands):

Funded status at end of year:

Projected benefit obligation	\$ 8,963
Assets at fair value	<u>8,947</u>
Funded status	<u>\$ (16)</u>

Change in projected benefit obligation:

Benefit obligation at date of acquisition	\$(8,995)
Service costs	(39)
Interest costs	(183)
Actuarial gains (losses)	121
Benefits paid	<u>133</u>

Projected benefit obligation at end of year

\$ (8,963)

Changes in plan assets:

Fair value of plan assets at acquisition date	\$ 9,056
Actual return on plan assets	24
Benefits paid	<u>(133)</u>

Fair value of plan assets at end of year

\$ 8,947

Net amount recorded in consolidated balance sheet:

Noncurrent liabilities	<u>\$ (16)</u>
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Accumulated benefit obligation at end of year

\$ 8,946

The weighted-average assumptions used to determine pension benefit obligation were as follows:

	<u>2007</u>
Discount rate	5.95%
Rate of long-term compensation increase	4.00%

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Components of the related tax effects for each component of other comprehensive income follows related to the plan for December 31, 2007 are as follows (in thousands):

	<u>Before-Tax Amount</u>	<u>Tax (Expense) or Benefit</u>	<u>Net-of-Tax Amount</u>
Accumulated other comprehensive income at date of acquisition . .	\$ —	\$—	\$ —
Net actuarial loss arising during current year	(91)	35	(56)
Accumulated other comprehensive income at end of year	<u>\$(91)</u>	<u>\$35</u>	<u>\$(56)</u>

No components of other comprehensive income will be amortized into income in 2008.

The change in unrecognized net gain/loss is one measure of the degree to which important assumptions have coincided with actual experience. The company changes important assumptions whenever changing conditions warrant. The discount rate is typically changed at least annually and the expected long-term return on plan assets will typically be revised every three to five years. Other material assumptions include the compensation increase rates, rates of employee termination, and rates of participant mortality. The discount rate was determined by projecting the plan's expected future benefit payments as defined for the projected benefit obligation, discounting those expected payments using a theoretical zero-coupon spot yield curve derived from a universe of high-quality bonds as of the measurement date, and solving for the single equivalent discount rate that resulted in the same projected benefit obligation. The expected return on plan assets was determined based on historical and expected future returns of the various asset classes, using the target allocations as follows: equity securities (64.5%), debt securities (34.7%) and other (0.8%). The plan's investment policy includes a mandate to diversify assets and invest in a variety of asset classes to achieve that goal. The plan's assets are currently invested in a variety of funds representing most standard equity and debt security classes. While no significant changes in the asset allocation are expected during the coming year, the Company may make changes at any time.

The following estimated future benefit payments are expected to be paid in the years indicated (in thousands):

2008	\$ 523
2009	521
2010	644
2011	644
2012	715
2013 – 2017	3,586

8. Commitments and Contingencies

a. Operating Lease Obligations

The Company leases certain of its manufacturing facilities under noncancelable operating leases expiring at various dates through December 2012. The Company incurred rental expense under these leases of \$2.7 million, \$2.8 million and \$2.0 million for the years ended 2007, 2006 and 2005, respectively. The

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

approximate minimum rental commitments required under existing noncancelable leases as of December 31, 2007 are as follows (in thousands):

2008	\$2,370
2009	2,090
2010	1,636
2011	209
2012	<u>9</u>
	<u>\$6,314</u>

b. Legal Proceedings

In August, September and December 2006, shareholder derivative lawsuits were filed in the California Superior Court for Orange County, purportedly on behalf of Ceradyne against various current and former officers and directors of the Company relating to alleged backdating of stock options. Each state court complaint alleged claims for breach of fiduciary duty, abuse of control, gross mismanagement, waste of corporate assets, unjust enrichment, accounting, rescission, constructive trust, and violations of California Corporations Code. All state court actions have been consolidated into one case, designated, *In re Ceradyne, Inc. Derivative Litigation*, Orange County Superior Court, Case No. 06-CC-00156.

In September and December 2006, shareholder derivative lawsuits were filed in the United States District Court for the Central District of California, purportedly on behalf of Ceradyne against various current and former officers and directors of the Company relating to alleged backdating of stock options. All federal court actions have been consolidated into one case, designated, *In re Ceradyne, Inc. Derivative Litigation*, Master File No. SA CV 06-919 JVS. The consolidated federal action alleges, pursuant to a first amended consolidated complaint filed on September 17, 2007, claims for violations of Section 10(b) of the Securities Exchange Act and Rule 10b-5 thereunder, violations of Section 14(a) of the Securities Exchange Act, violations of Section 20(a) of the Securities Exchange Act, insider selling under the California Corporations Code, as well as common law claims for accounting, breach of fiduciary duty, aiding and abetting breaches of fiduciary duty, unjust enrichment, rescission and waste.

The plaintiffs in both the state and federal actions seek to require the individual defendants to rescind stock options they received which have an exercise price below the closing price of the Company's common stock on the date of grant, to disgorge the proceeds of options exercised, to reimburse the Company for damages of an unspecified amount, and also seek certain equitable relief, attorneys' fees and costs.

On October 26, 2007, the Company and the individual defendants filed motions to dismiss the first amended consolidated complaint in the federal action. In December 2007, plaintiffs filed a second amended consolidated complaint. The Company and the individual defendants have entered into a stipulation providing that motions to dismiss the second amended consolidated complaint will be filed by February 29, 2008 and that the hearing on the motions will be held on May 5, 2008. The plaintiffs in the state court action have agreed to voluntarily stay the state court action until May 2008, pending the federal court's rulings on the motions to dismiss.

In summary, there are currently two shareholder derivative actions pending which contain substantially similar allegations. The cases filed in the Orange County Superior Court have been consolidated into one case, designated, *In re Ceradyne, Inc. Derivative Litigation*, Orange County Superior Court, Case No. 06-CC-00156. The cases filed in the United States District Court for the Central District of California have all been consolidated into one case, designated, *In re Ceradyne, Inc. Derivative Litigation*, Master File No. SA CV 06-919 JVS.

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Settlement discussions have been actively pursued in both the state and federal actions; however, no agreements have been reached to date. The impact of the outcome of these lawsuits is undeterminable at this time.

A class action lawsuit was filed on March 23, 2007, in the California Superior Court for Orange County (Civil Action No. 07CC01232), in which it is asserted that the representative plaintiff, a former Ceradyne employee, and the putative class members, were not paid overtime at an appropriate overtime rate. The complaint alleges that the purportedly affected employees should have had their regular rate of pay for purposes of calculating overtime, adjusted to reflect the payment of a bonus to them for the four years preceding the filing of the complaint. The complaint further alleges that a waiting time penalty should be assessed for the failure to timely pay the correct overtime payment. Ceradyne has filed an answer denying the material allegations of the complaint. We believe that the lawsuit is without merit on the basis that our bonus policy is discretionary and is not of the type that is subject to inclusion in the regular hourly rate for purposes of calculating overtime, and we intend to vigorously defend this action. We also believe that the putative class members are not similarly situated and, therefore, this case should not proceed as a class action.

9. Disclosure About Segments of Enterprise and Related Information

The Company serves its markets and manages its business through six operating segments, each of which has its own manufacturing facilities and administrative and selling functions. The Company's Advanced Ceramic Operations, located in Costa Mesa, Irvine and San Diego, California, Lexington, Kentucky and Wixom, Michigan primarily produces armor, orthodontic products, diesel engine parts, components for semiconductor equipment, and houses the Company's SRBSN research and development activities. The Company's cathode development and production are handled through its Semicon Associates division located in Lexington, Kentucky. Fused silica products, including missile radomes and crucibles for photovoltaic solar cell applications are produced at the Company's Thermo Materials division located in Scottdale and Clarkston, Georgia. The Company's recently constructed manufacturing facility in Tianjin, China manufactures fused silica crucibles, and is part of the Thermo Materials operating segment. Minco, Inc., which Ceradyne acquired on July 10, 2007, also is included in the Thermo Materials operating segment. Minco manufactures fused silica, which is a primary raw material used in products manufactured by our Thermo Materials division. The Company's ESK Ceramics subsidiary is located in Kempten, Germany and Bazet, France. This subsidiary produces ceramic powders, including boron carbide powder for ceramic body armor, evaporation boats for metallization, functional and frictional coatings utilized in the automotive and textile industries, high performance pump seals, fluid handling, refractory products and ceramic powders used in cosmetics. The Company's Ceradyne Canada subsidiary acquired certain assets in June 2006, including a building, equipment and technology, related to the production of structural neutron absorbing materials for use in the storage of spent nuclear rods. The building and operations of Ceradyne Canada are located in Chicoutimi, Quebec, Canada. The Company added a sixth operating segment in August 2007, when it acquired EaglePicher Boron, LLC. The Company has changed the name of this subsidiary to Boron Products, LLC and does business as Ceradyne Boron Products. Boron Products owns certain assets, including approximately 155 acres and several buildings, equipment and technology, related to the production of the boron isotope ¹⁰B. This isotope is a strong neutron absorber and is used for both nuclear waste containment and nuclear power plant neutron radiation control. Boron Products also produces complementary chemical isotopes used in the normal operation and control of nuclear power plants. The U.S. government and government agencies collectively represented approximately 71.6% of our net sales in 2007, 73.4% in 2006 and 65.8% in 2005.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

**SEGMENT INFORMATION FOR THE YEARS ENDED
DECEMBER 31, 2007, 2006 AND 2005**

	<u>2007</u>	<u>2006</u>	<u>2005</u>
	(Amounts in thousands)		
<u>Revenue</u>			
ACO	\$587,279	\$528,687	\$242,836
ESK Ceramics	160,623	148,154	123,172
Semicon Associates	7,970	9,065	7,444
Thermo Materials	32,025	15,021	12,173
Ceradyne Canada	3,916	2,405	—
Ceradyne Boron Products	7,766	—	—
Inter-segment elimination	(42,744)	(40,444)	(17,372)
Total revenue from external customers	<u>\$756,835</u>	<u>\$662,888</u>	<u>\$368,253</u>
<u>Depreciation and Amortization</u>			
ACO	\$ 9,328	\$ 7,589	\$ 5,662
ESK Ceramics	10,630	8,822	8,191
Semicon Associates	346	363	372
Thermo Materials	3,061	921	978
Ceradyne Canada	732	359	—
Ceradyne Boron Products	2,654	—	—
Total	<u>\$ 26,751</u>	<u>\$ 18,054</u>	<u>\$ 15,203</u>
<u>Segment Income before Provision for Income Taxes</u>			
ACO	\$212,681	\$177,039	\$ 63,655
ESK Ceramics	13,373	17,304	10,219
Semicon Associates	1,131	1,580	894
Thermo Materials	2,304	881	(209)
Ceradyne Canada	(3,041)	(680)	—
Ceradyne Boron Products	727	—	—
Inter-segment elimination	(632)	(1,565)	(1,329)
Total	<u>\$226,543</u>	<u>\$194,559</u>	<u>\$ 73,230</u>

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	<u>2007</u>	<u>2006</u>	<u>2005</u>
	(Amounts in thousands)		
<u>Segment Assets</u>			
ACO	\$410,244	\$396,766	\$253,426
ESK Ceramics	209,384	174,926	158,118
Semicon Associates	5,682	6,174	6,111
Thermo Materials	67,465	17,844	12,538
Ceradyne Canada	20,480	18,105	—
Ceradyne Boron Products	<u>70,031</u>	<u>—</u>	<u>—</u>
Total	<u>\$783,286</u>	<u>\$613,815</u>	<u>\$430,193</u>
<u>Expenditures for PP&E</u>			
ACO	\$ 8,174	\$ 15,598	\$ 12,382
ESK Ceramics	17,384	6,749	5,826
Semicon Associates	396	250	223
Thermo Materials	14,696	4,696	1,792
Ceradyne Canada	1,528	8,715	—
Ceradyne Boron Products	<u>67</u>	<u>—</u>	<u>—</u>
Total	<u>\$ 42,245</u>	<u>\$ 36,008</u>	<u>\$ 20,223</u>

**SEGMENT INFORMATION FOR THE YEARS ENDED
DECEMBER 31, 2007, 2006 AND 2005**

	<u>2007</u>	<u>2006</u>	<u>2005</u>
<u>Percentage of U.S. net sales from external customers</u>			
ACO	75%	78%	63%
ESK Ceramics	2%	3%	7%
Semicon Associates	1%	1%	2%
Thermo Materials	2%	2%	2%
Ceradyne Canada	1%	—	—
Ceradyne Boron Products	<u>1%</u>	<u>—</u>	<u>—</u>
Total percentage of U.S. net sales from external customers	<u>82%</u>	<u>84%</u>	<u>74%</u>
<u>Percentage of foreign net sales from external customers</u>			
ACO	2%	2%	3%
ESK Ceramics	14%	13%	22%
Semicon Associates	—	—	0%
Thermo Materials	2%	1%	1%
Ceradyne Canada	—	—	—
Ceradyne Boron Products	<u>—</u>	<u>—</u>	<u>—</u>
Total percentage of foreign net sales from external customers	<u>18%</u>	<u>16%</u>	<u>26%</u>

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

	<u>2007</u>	<u>2006</u>	<u>2005</u>
<u>Percentage of total net sales from external customers</u>			
ACO	77%	80%	66%
ESK Ceramics	16%	16%	29%
Semicon Associates	1%	1%	2%
Thermo Materials	4%	3%	3%
Ceradyne Canada	1%	—	—
Ceradyne Boron Products	1%	—	—
Total percentage of net sales from external customers	<u>100%</u>	<u>100%</u>	<u>100%</u>

The following is revenue by product line for Advanced Ceramic Operations for the years ended (amounts in thousands):

	<u>December 31,</u>		
	<u>2007</u>	<u>2006</u>	<u>2005</u>
Armor	\$551,301	\$488,230	\$207,111
Automotive	10,961	17,018	16,019
Orthodontics	10,603	10,372	9,834
Industrial	14,414	13,067	9,872
	<u>\$587,279</u>	<u>\$528,687</u>	<u>\$242,836</u>

10. Share-Based Compensation

The Company adopted SFAS 123(R) using the modified prospective application transition method, which requires the application of the accounting standard as of January 1, 2006, the first day of the Company's fiscal year 2006. The Company's Consolidated Financial Statements as of and for the years ended December 31, 2007 and December 31, 2006 reflect the impact of SFAS 123(R). In accordance with this transition method, the Company's Consolidated Financial Statements for prior periods have not been restated to reflect, and do not include, the impact of SFAS 123(R). Share-based compensation expense recognized under SFAS 123 (R) for the years ended December 31, 2007 and December 31, 2006 was \$2.5 million and \$1.5 million, respectively, which was related to stock options and restricted stock units. Additionally, a pretax stock-based compensation charge of approximately \$2.4 million was taken in the year ended December 31, 2006. See Note 11 below for information concerning an internal investigation into our stock option grant practices for the period of 1997 through June 30, 2006. The information in this Note 10 is qualified by reference to the information set forth in Note 11 to the extent applicable.

SFAS 123(R) requires companies to estimate the fair value of share-based payment awards on the grant-date using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods in the Company's Consolidated Statements of Income. Prior to the adoption of SFAS 123(R), the Company accounted for share-based awards to employees and directors using the intrinsic value method in accordance with APB 25 as allowed under SFAS No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123"). Under the intrinsic value method, no share-based compensation expense related to stock options had been recognized in the Company's Consolidated Statements of Operations on the basis that the exercise price of the Company's stock options granted to employees and directors equaled the fair market value of the underlying stock at the grant-date. Specifically, the Company's original accounting was based upon the understanding that options were granted with no intrinsic value. However, as described in Note 11, the Company now believes that certain options were granted with a positive intrinsic value.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Share-based compensation expense is based on the value of the portion of share-based payment awards that is ultimately expected to vest. SFAS 123(R) requires forfeitures to be estimated at the time of grant in order to estimate the amount of share-based awards that will ultimately vest. The forfeiture rate is based on historical rates. Share-based compensation expense recognized in the Company's Consolidated Statements of Income for the years ended December 31, 2007 and December 31, 2006 includes (i) compensation expense for share-based payment awards granted prior to, but not yet vested as of January 1, 2006, based on the grant-date fair value estimated in accordance with the pro forma provisions of SFAS 123 and (ii) compensation expense for the share-based payment awards granted subsequent to December 31, 2006, based on the grant-date fair value estimated in accordance with the provisions of SFAS 123(R). As share-based compensation expense recognized in the Consolidated Statement of Income for the years ended December 31, 2007 and December 31, 2006 is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. In the Company's pro forma information required under SFAS 123 for the periods prior to fiscal 2006, the Company accounted for forfeitures as they occurred.

The Company maintains the 1994 Stock Incentive Plan and 2003 Stock Incentive Plan. The 1995 Employee Stock Purchase Plan ended in December 2005.

The Company was authorized to grant options for up to 2,362,500 shares under its 1994 Stock Incentive Plan. The Company has granted options for 2,691,225 shares and has had cancellations of 395,786 shares through December 31, 2007. There are no remaining stock options available to grant under this plan. The options granted under this plan generally became exercisable over a five-year period for incentive stock options and six months for nonqualified stock options and have a maximum term of ten years.

The 2003 Stock Incentive Plan was amended in 2005 to allow the issuance of Restricted Stock Units (the "Units") to eligible employees and non-employee directors. The Units are payable in shares of the Company's common stock upon vesting. For directors, the Units vest annually over three years on the anniversary date of their issuance. For officers and employees, the Units vest annually over five years on the anniversary date of their issuance.

The Company may grant options and Units for up to 1,125,000 shares under the 2003 Stock Incentive Plan. The Company has granted options for 475,125 shares and Units for 227,400 shares under this plan through December 31, 2007. There have been cancellations of 67,500 shares associated with this plan through December 31, 2007. The options under this plan have a life of ten years.

During the years ended December 31, 2007 and 2006, the Company issued Units to certain directors, officers and employees with weighted average grant date fair values and Units issued as indicated in the table below. Pursuant to SFAS 123(R), the Company records compensation expense for the amount of the grant date fair value on a straight line basis over the vesting period. The Company incurred charges associated with the vesting of the Units of \$1.7 million for the year ended December 31, 2007 and \$0.8 million for the year ended December 31, 2006.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Share-based compensation expense reduced the Company's results of operations as follows (in thousands, except per share amounts):

	<u>2007</u>	<u>2006</u>	<u>2005</u>
Share-based compensation expense recognized:			
General and administrative, options	\$ 710	\$ 3,074	\$ 110
General and administrative, Units	1,741	827	222
Related deferred income tax benefit	<u>(890)</u>	<u>(1,326)</u>	<u>(120)</u>
Decrease in net income	<u>\$1,561</u>	<u>\$ 2,575</u>	<u>\$ 212</u>
Decrease in basic earnings per share	<u>\$ 0.06</u>	<u>\$ 0.10</u>	<u>\$0.01</u>
Decrease in diluted earnings per share	<u>\$ 0.06</u>	<u>\$ 0.09</u>	<u>\$0.01</u>

The amounts above include the impact of recognizing compensation expense related to non-qualified stock options.

As of December 31, 2007, there was \$1.1 million of total unrecognized compensation cost related to 67,725 non-vested outstanding stock options, with a per share weighted average value of \$19.75. The unrecognized expense is anticipated to be recognized on a straight-line basis over a weighted average period of 1.5 years. In addition, the aggregate intrinsic value of stock options exercised for the twelve months ended December 31, 2007 was \$8.7 million.

As of December 31, 2007, there was approximately \$6.7 million of total unrecognized compensation cost related to non-vested Units granted under the 2003 Stock Incentive Plan. That cost is expected to be recognized over a weighted average period of 3.8 years.

The following is a summary of stock option activity:

	<u>2007</u>		<u>2006</u>		<u>2005</u>	
	Number of Options	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price
Outstanding, beginning of year ...	677,370	\$11.41	977,870	\$10.49	1,145,703	\$ 7.79
Options granted	—	\$ —	—	\$ —	37,500	\$20.21
Options exercised	(159,495)	\$ 8.15	(294,050)	\$ 8.10	(175,708)	\$ 5.45
Options cancelled	<u>(20,550)</u>	<u>\$21.50</u>	<u>(6,450)</u>	<u>\$22.71</u>	<u>(29,625)</u>	<u>\$ 6.43</u>
Outstanding, end of year	<u>497,325</u>	<u>\$12.04</u>	<u>677,370</u>	<u>\$11.41</u>	<u>977,870</u>	<u>\$ 8.73</u>
Exercisable, end of year	429,600	\$10.83	481,470	\$ 9.83	623,870	\$ 6.93

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following is a summary of Unit activity:

	2007		2006		2005	
	Units	Weighted Average Grant Fair Value	Units	Weighted Average Grant Fair Value	Units	Weighted Average Grant Fair Value
Outstanding, beginning of year	137,100	\$41.13	77,000	\$22.44	—	\$ —
Granted	72,850	\$66.06	77,550	\$55.48	77,000	22.44
Vested	(31,791)	\$41.47	(16,450)	\$22.68	—	—
Forfeited	<u>(28,400)</u>	<u>\$42.39</u>	<u>(1,000)</u>	<u>\$22.46</u>	<u>—</u>	<u>—</u>
Non-vested Units at end of year . . .	<u>149,759</u>	\$52.94	<u>137,100</u>	\$41.13	<u>77,000</u>	\$22.44

The following table summarizes information regarding options outstanding and options exercisable at December 31, 2007:

Range of Exercise Prices	Outstanding				Exercisable			
	Number of Options	Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Aggregate Intrinsic Value (000s)	Number of Options	Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Aggregate Intrinsic Value (000s)
\$1.44 - \$2.81	5,400	1.21	\$ 1.68	\$ 243	5,400	1.21	\$ 1.68	\$ 243
\$2.98 - \$4.58	230,050	4.06	\$ 4.09	\$ 9,795	230,050	4.06	\$ 4.09	\$ 9,795
\$10.53 - \$16.89	130,125	5.69	\$16.89	\$ 3,875	109,650	5.69	\$16.89	\$ 3,265
\$18.80 - \$24.07	<u>131,750</u>	6.71	\$21.56	\$ 3,308	<u>84,500</u>	6.62	\$21.88	\$ 2,095
Total	<u>497,325</u>	5.16	\$12.04	<u>\$17,221</u>	<u>429,600</u>	4.94	\$10.83	<u>\$15,398</u>

The following table summarizes information regarding Units outstanding at December 31, 2007:

Range of Grant Prices	Outstanding			
	Number of Units	Average Remaining Contractual Life (Years)	Weighted Average Grant Price	Aggregate Intrinsic Value (000s)
\$21.46 - \$22.68	34,500	2.28	\$22.36	\$839
\$42.28 - \$45.67	12,669	2.79	\$44.17	\$ 32
\$52.46 - \$62.07	55,740	3.65	\$59.14	\$ —
\$66.35 - \$81.18	<u>46,850</u>	4.31	\$69.42	\$ —
	<u>149,759</u>	3.47	\$52.62	<u>\$871</u>

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table illustrates the effect on net income and earnings per share for the year ended December 31, 2005, as if the Company had applied the fair value recognition provisions of SFAS 123, as amended by SFAS No. 148, "Accounting for Stock-Based Compensation — Transition and Disclosure" ("SFAS 148") (in thousands, except share and per share data):

	2005
Net income, as reported	\$ 46,778
Deduct: total stock-based employee compensation expense determined under the fair value based method for all awards, net of related tax effects	(689)
Pro forma net income	<u>\$ 46,089</u>
Net income per Share:	
Basic — as reported	\$ 1.90
Basic — pro forma	\$ 1.87
Diluted — as reported	\$ 1.86
Diluted — pro forma	\$ 1.84
Weighted average shares outstanding:	
Basic	24,634,558
Diluted	25,107,395

The pro forma amounts and share based compensation were estimated using the Black-Scholes option-pricing model with the following assumptions:

	2005
Expected term (years)	7.0
Volatility	56.75%
Annual dividend per share	\$ 0.00
Risk free interest rate	3.98%
Weighted-average fair value of options granted	\$12.29

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. The Company's options have characteristics significantly different from those of traded options, and changes in the subjective input assumptions can materially affect the fair value estimate.

The Company calculates expected volatility based on historical data of the Company's common stock. The risk-free interest rate assumption is based upon an observed interest rate appropriate for the term of the Company's employee stock options. The dividend yield assumption is based on the Company's intent not to issue a dividend under its dividend policy. The expected holding period assumption was estimated based on historical experience.

11. Review of Historical Stock Option Grant Procedures

In July 2006, the Company voluntarily initiated a review of its historical stock option grant practices and related accounting treatment. The review was conducted by a Special Committee comprised of three independent members of the Company's Board of Directors, with the assistance of independent legal counsel and forensic accounting experts. The scope of the Special Committee's review included all stock options granted by the Company from January 1997 through September 2003. The Special Committee has completed its review.

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Until September 2003, stock option grants generally were approved by unanimous written consents signed by the members of the Stock Option Committee of the Board of Directors. Throughout this period, the Stock Option Committee consisted of the CEO and one other non-management Director. The date specified as the grant date in each unanimous written consent was used (i) to determine the exercise price of the options and (ii) as the accounting measurement date.

The review found that from January 1997 through September 2003, the date selected by management as the grant date and accounting measurement date was the date specified in the unanimous written consent, but that, in all but one case, the unanimous written consents were not prepared, approved or executed by the Company's Stock Option Committee until a later date. There were a total of 23 grant dates from January 1997 through September 2003. The Company's CEO was responsible for selecting the grant dates and followed a consistent practice of seeking low grant prices and he was unaware of the accounting implications of the method he used. Therefore, the use of the date specified in the unanimous written consent as the accounting measurement date was incorrect in all but one case. The proper accounting measurement date was the date the unanimous written consent was signed by the members of the Stock Option Committee.

Based upon information gathered during the review by independent legal counsel, the Special Committee and the Board of Directors have concluded that, while the Company applied an option price date selection practice that resulted in the use of incorrect accounting measurement dates for options granted between January 1997 and September 2003, the accounting errors resulting from the use of incorrect measurement dates were not the product of any deliberate or intentional misconduct by the Company or its executives, staff or Board of Directors. However, as a result of using revised measurement dates for options granted from January 1997 through September 2003, the Company recorded a charge in the second quarter ended June 30, 2006 of \$3.4 million (\$2.3 million after income taxes) pertaining to the years ended December 31, 1997 to 2005 and the six months ended June 30, 2006 (the "Stock-Based Charge"). The Stock-Based Charge was included as a component of general and administrative expenses in the consolidated statements of income as this is where the affected individual's normal compensation costs are recorded. The Stock-Based Charge includes non-cash compensation expense of \$2.2 million (\$1.4 million after income taxes) primarily related to stock option grants made during the period from January 1997 through September 2003 that should have been measured as compensation cost at the actual stock option grant dates, and subsequently amortized to expense over the vesting period for each stock option grant. The Stock-Based Charge also includes \$1.2 million (\$0.9 million after income taxes) of estimated additional employment and other taxes that are expected to become payable.

From September 2003 to February 2005, all stock option grants have been approved at meetings held by the Stock Option Committee, and, since February 2005, all stock option grants have been approved at meetings held by the Compensation Committee of the Board of Directors. The dates of these meetings have been used correctly as the accounting measurement date for all stock options granted since September 2003.

Had this estimated Stock-Based Charge been reflected, as and when incurred, in the Company's results of operations for prior years, the impact on net income for Ceradyne's fiscal years ended December 31 would have been a reduction of \$21,000 in 1997, a reduction of \$45,000 in 1998, a reduction of \$47,000 in 1999, a reduction of \$104,000 in 2000, a reduction of \$269,000 in 2001, a reduction of \$74,000 in 2002, a reduction of \$347,000 in 2003, a reduction of \$611,000 in 2004, and a reduction of \$324,000 in 2005. As of December 31, 2006, the total remaining incremental stock-based compensation charge related to these stock option grants that are expected to vest in future periods with a revised accounting measurement date is immaterial. There was no impact on revenue or net cash provided by operating activities as a result of the estimated compensation charge.

The Company does not believe that a restatement of its prior-period financial statements is required for the Stock-Based Charge. Based on the materiality guidelines contained in SEC Staff Accounting Bulletin No. 99, *Materiality* (SAB 99), the Company believes that the Stock-Based Charge is not material to any of

CERADYNE, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

the individual prior periods affected and the aggregate Stock-Based Charge is not material to the results for the year ended December 31, 2006.

Prior to December 31, 2006, the current members of Ceradyne's Board of Directors, all current executive officers and all other employees of the Company amended all unexercised stock options they held which had an exercise price that is less than the price of the Company's common stock on the actual date of grant, by increasing the exercise price to an amount equal to the closing price of the common stock as of the actual grant date. The Company has and will continue to reimburse all non-executive officer employees for the increase in the exercise price for the modified options as they vest. Such reimbursement has and will not be material.

12. Quarterly Financial Information (unaudited)

The results by quarter for 2007 and 2006 (amounts in thousands except per share data):

Quarter Ending

	<u>March 31, 2006</u>	<u>June 30, 2006</u>	<u>September 30, 2006</u>	<u>December 31, 2006</u>
Net sales	\$136,347	\$162,016	\$185,796	\$178,729
Gross profit	53,985	63,681	70,531	72,700
Net income	24,613	29,129	36,922	37,740
Basic income per share	\$ 0.92	\$ 1.08	\$ 1.37	\$ 1.40
Diluted income per share	\$ 0.90	\$ 1.07	\$ 1.34	\$ 1.38

Quarter Ending

	<u>March 31, 2007</u>	<u>June 30, 2007</u>	<u>September 30, 2007</u>	<u>December 31, 2007</u>
Net sales	\$188,443	\$185,359	\$191,606	\$191,428
Gross profit	77,112	77,384	75,787	75,766
Net income	38,089	38,303	32,650	35,224
Basic income per share	\$ 1.40	\$ 1.41	\$ 1.20	\$ 1.29
Diluted income per share	\$ 1.38	\$ 1.38	\$ 1.16	\$ 1.28

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

CERADYNE, INC.

By: /s/ JOEL P. MOSKOWITZ

Joel P. Moskowitz
Chief Executive Officer

February 26, 2008

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>/s/ JOEL P. MOSKOWITZ</u> Joel P. Moskowitz	Chairman of the Board, Chief Executive Officer, President and Director (Principal Executive Officer)	February 26, 2008
<u>/s/ JERROLD J. PELLIZZON</u> Jerrold J. Pellizzon	Chief Financial Officer (Principal Financial and Accounting Officer)	February 26, 2008
<u>/s/ RICHARD A. ALLIEGRO</u> Richard A. Alliegro	Director	February 26, 2008
<u>/s/ FRANK EDELSTEIN</u> Frank Edelstein	Director	February 26, 2008
<u>/s/ RICHARD A. KERTSON</u> Richard A. Kertson	Director	February 26, 2008
<u>/s/ WILLIAM C. LACOURSE</u> William C. LaCourse	Director	February 26, 2008
<u>/s/ MILTON L. LOHR</u> Milton L. Lohr	Director	February 26, 2008

C O R P O R A T E D I R E C T O R Y

Directors	Joel P. Moskowitz Richard A. Alliegro Frank Edelstein Richard A. Kertson William C. LaCourse Milton L. Lohr	<i>Chairman of the Board, Chief Executive Officer and President</i> <i>Ceramic Technology Consultant</i> <i>Independent Consultant</i> <i>Former CFO of Varco International, Inc.</i> <i>Kruson Distinguished Professor, NYS College of Ceramics, Alfred University</i> <i>Business and Defense Consultant</i>
Officers	Joel P. Moskowitz Thomas A. Cole Dr. Thomas Juengling Marc A. King Michael A. Kraft Bruce Lockhart Kenneth R. Morris Jerrold J. Pellizzon David P. Reed Jeffrey J. Waldal	<i>Chairman of the Board, Chief Executive Officer and President</i> <i>Vice President Business Development</i> <i>Vice President, and President of ESK Ceramics</i> <i>Vice President, and President Ceradyne Armor Systems, Inc.</i> <i>Vice President Nuclear and Semiconductor Business Units</i> <i>Vice President, and President of Ceradyne Thermo Materials</i> <i>Vice President Operations</i> <i>Chief Financial Officer and Corporate Secretary</i> <i>Vice President, and President of North American Operations</i> <i>Vice President, and President of Semicon Associates, a Ceradyne Company</i>
Transfer Agent and Registrar	American Stock Transfer and Trust Co. 59 Maiden Lane New York, NY 10038-4667	
General Counsel	Stradling Yocca Carlson & Rauth 660 Newport Center Drive, 16th Floor Newport Beach, California 92660-6401	
Independent Public Accountants	PricewaterhouseCoopers LLP 2020 Main Street, Suite 400 Irvine, California 92614	
Corporate Offices	Ceradyne, Inc. 3169 Red Hill Avenue Costa Mesa, California 92626 (714) 549-0421 (800) 839-2189 www.ceradyne.com	
Manufacturing Facilities	▼ Advanced Ceramic Operations: Ceradyne Advanced Ceramic Operations 3169 Red Hill Avenue Costa Mesa, CA 92626 Ceradyne Advanced Ceramic Operations 17466 Daimler Avenue Irvine, CA 92614 1922 Baranca Parkway Irvine, CA 92606 Ceradyne Advanced Ceramic Operations 2416 Merchant Street Lexington, KY 40511 Ceradyne Vehicle Armor Systems 50370 Dennis Court Wixom, MI 48393	Ceradyne Boron Products LLC 798 Highway 69A Quapaw, OK 74363 Minco, Inc., a Ceradyne Company 510 Midway Circle Midway, TN 37809 Ceradyne Canada 2702 Talbot Blvd. Chicoutimi, Quebec Canada, G7H 5B1 ▼ Ceradyne Thermo Materials: Ceradyne Thermo Materials 3449 Church Street Scottdale, GA 30079 Ceradyne Thermo Materials 696 Park North Blvd., Suite 100 Clarkston, GA 30021 Ceradyne Thermo Materials 780 Park North Blvd., Suite 110 Clarkston, GA 30021
		Ceradyne Tianjin Technical Ceramics No. 4737 Dongjiang Road Tianjin Tanggu Marine Hi-Tech Development Area Tianjin, 300451, China ▼ Semicon Associates, a Ceradyne Company: Ceradyne Semicon Associates 695 Laco Drive Lexington, KY 40510 ▼ ESK Ceramics: ESK Ceramics Max-Schaidhauf-Strasse 25 87437 Kempten, Germany ESK Ceramics France Zone Industrielle 65460 Bazet, France
Annual Meeting	The annual stockholders' meeting will be held at the Radisson Hotel, 4545 MacArthur Blvd., Newport Beach, CA 92660 on Tuesday, June 17, 2008, at 10:00 A.M.	



3169 Red Hill Avenue

Costa Mesa, California 92626

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